NORTHWEST EMC

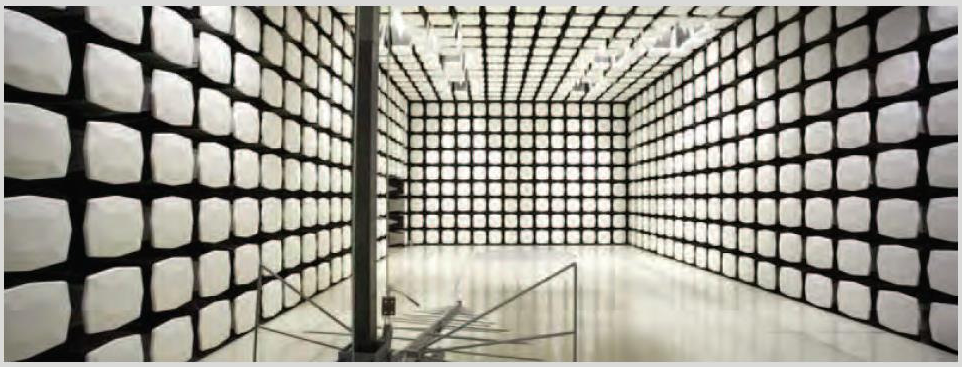
Parallel Wireless Inc.

CWS-3050-02

FCC 24E:2016
FCC 24.238:2016

Converged Wireless System

Report # KMWC0073.1



NVLAP TESTING

NVLAP Lab Code: 200676-0

CERTIFICATE OF TEST

NORTHWEST EMC
2014-12-10

Last Date of Test: September 23, 2016
Parallel Wireless Inc.
Model: CWS-3050-02

Radio Equipment Testing

Standards

Specification	Method
FCC 24.238:2016	ANSI/TIA/EIA-603-D-2010
FCC 24E:2016	

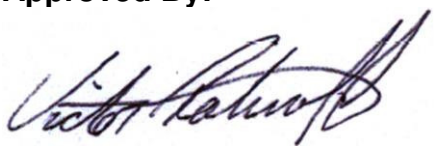
Results

Method Clause	Test Description	Applied	Results	Comments
2.2.1	Equivalent Isotropic Radiated Power (EIRP)	Yes	Pass	
2.2.1	Peak To Average Ratio	Yes	Pass	
2.2.2	Frequency Stability	Yes	Pass	
2.2.3	Occupied Bandwidth	Yes	Pass	
2.2.12	Out of Band Emissions – LTE Band 2	Yes	Pass	
2.2.13	Band Edge Compliance	Yes	Pass	
2.2.13	Spurious Emissions at the Antenna Terminals	Yes	Pass	
2.2.13	Intermodulation	Yes	Pass	

Deviations From Test Standards

None

Approved By:



Victor Ratinoff, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information.

REVISION HISTORY

NORTHWEST EMC
REV 2014.10.14

Revision Number	Description	Date	Page Number
00	None		

ACCREDITATIONS AND AUTHORIZATIONS

NORTHWEST EMC
REV 2016.7.25

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 17065 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

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with ISED.

European Union

European Commission – Validated by the European Commission as a Notified Body under the R&TTE Directive.

Australia/New Zealand

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

Korea

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

Japan

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

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.

Singapore

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

Israel

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

Hong Kong

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

Vietnam

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

SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/
http://gsi.nist.gov/global/docs/cabs/designations.html

MEASUREMENT UNCERTAINTY

TMU.2015.07.10

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 16-4-2 as applicable), and are available upon request.

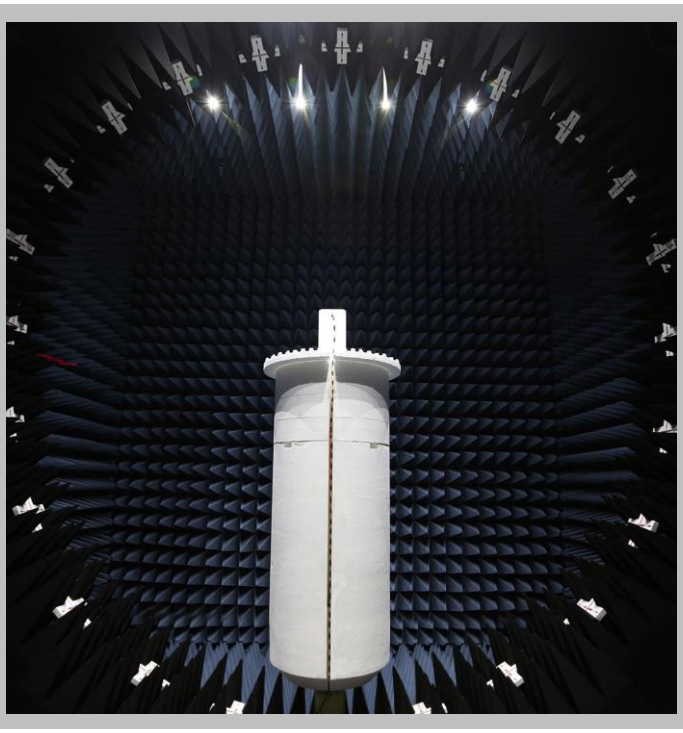
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

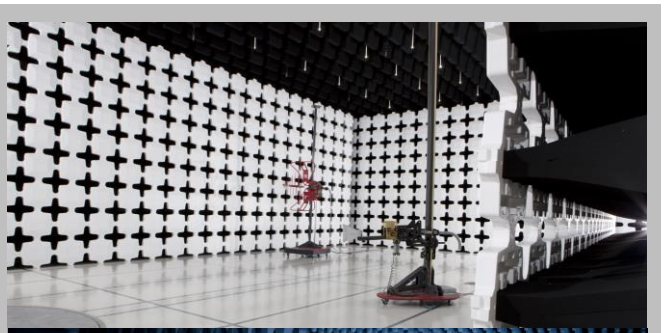
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

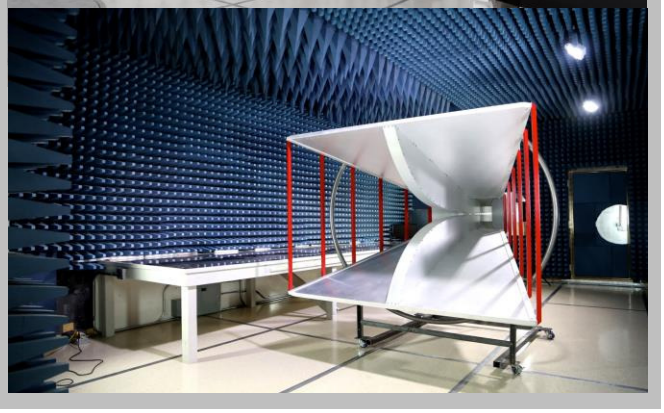
FACILITIES

NORTHWEST EMC
REV 2016.7.25

California	Minnesota	New York	Oregon	Texas	Washington
Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Innovation, Science and Economic Development Canada					
2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-*2*	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157







PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Parallel Wireless Inc.
Address:	1 Tara Blvd, Suite #404
City, State, Zip:	Nashua, NH 03062
Test Requested By:	Edward Lee of KMW Communications
Model:	CWS-3050-02
First Date of Test:	August 22, 2016
Last Date of Test:	September 23, 2016
Receipt Date of Samples:	August 22, 2016
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Tower based Converged Wireless System Base Station operating in the UMTS Band 2 with WCDMA and LTE Band 2 with 5 MHz, 10 MHz, and 20 MHz channel bandwidths.

Testing Objective:
To demonstrate compliance of the Cellular radio to FCC 24E.

CONFIGURATIONS

NORTHWEST EMC 2014-12-10

Configuration KMWC0073- 1

Software/Firmware Running during test	
Description	**Version**
eNB2440_20160729_v0_1_41.pkg	41

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Converged Wireless System Base Station	Parallel Wireless Inc.	CWS-3050-02	K163000003

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
High Power Terminator	Telcon	KTMO400800060	1111-0064
Laptop	Samsung	NP300V5A	HGHS93-JBA00674K
Laptop Power Supply	Delta Electronics, Inc.	SADP-90FH D	CNBA4400215ABZ040C18685

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Cable	No	5m	No	CWS-3050 Tower	DC Mains
RF Output Cable x2	Yes	5m	No	CWS-3050 Tower	High Power Terminator
Ethernet Cable	No	2.5m	No	CWS-3050 Tower	Laptop
AC Cable	No	1.5m	No	AC Mains	Laptop Power Supply
DC Cable	No	2.0m	Yes	Laptop	Laptop Power Supply

Configuration KMWC0073- 2

Software/Firmware Running during test	
Description	**Version**
eNB2440_20160729_v0_1_41.pkg	41

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Converged Wireless System Base Station	Parallel Wireless Inc.	CWS-3050-02	K163000003

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
High Power Terminator	Telcon	KTMO400800060	1111-0064
High Power Terminator	Telcon	KTMO400800060	1111-0004

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Cable	No	5m	No	CWS-3050 Tower	DC Mains
Ethernet Cable	No	2.5m	No	CWS-3050 Tower	Unterminated
AISG Cable	Yes	3m	No	CWS-3050 Tower	Unterminated
AISG (ALM) Cable	Yes	6.1m	No	CWS-3050 Tower	Unterminated
RF Output Cable x2	Yes	5m	No	CWS-3050 Tower	High Power Terminator
Optical Cable	No	10m	No	CWS-3050 Tower	Unterminated
Ground Braid	No	2m	No	CWS-3050 Tower	Ground

CONFIGURATIONS

NORTHWEST EMC 2014-12-10

Configuration KMWC0076- 1

Software/Firmware Running during test	
Description	**Version**
eNB2440_20160729_v0_1_41.pkg	41

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Converged Wireless System Base Station	Parallel Wireless Inc.	CWS-3050-02	K163000003

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
High Power Terminator	Telcon	KTMO400800060	1111-0064
Laptop	Samsung	NP300V5A	HGHS93-JBA00674K
Laptop Power Supply	Delta Electronics, Inc.	SADP-90FH D	CNBA4400215ABZ040C18685

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Cable	No	5m	No	CWS-3050 Tower	DC Mains
RF Output Cable x2	Yes	5m	No	CWS-3050 Tower	High Power Terminator
Ethernet Cable	No	2.5m	No	CWS-3050 Tower	Laptop
AC Cable	No	1.5m	No	AC Mains	Laptop Power Supply
DC Cable	No	2.0m	Yes	Laptop	Laptop Power Supply

Configuration KMWC0076- 2

Software/Firmware Running during test	
Description	**Version**
eNB2440_20160729_v0_1_41.pkg	41

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Converged Wireless System Base Station	Parallel Wireless Inc.	CWS-3050-02	K163000003

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
High Power Terminator	Telcon	KTMO400800060	1111-0064
High Power Terminator	Telcon	KTMO400800060	1111-0004

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Cable	No	5m	No	CWS-3050 Tower	DC Mains
Ethernet Cable	No	2.5m	No	CWS-3050 Tower	Unterminated
AISG Cable	Yes	3m	No	CWS-3050 Tower	Unterminated
AISG (ALM) Cable	Yes	6.1m	No	CWS-3050 Tower	Unterminated
RF Output Cable x2	Yes	5m	No	CWS-3050 Tower	High Power Terminator
Optical Cable	No	10m	No	CWS-3050 Tower	Unterminated
Ground Braid	No	2m	No	CWS-3050 Tower	Ground

MODIFICATIONS

NORTHWEST EMC
2014-12-10

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	8/22/2016	Equivalent Isotropic Radiated Power (EIRP)	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	8/22/2016	Peak To Average Ratio	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	8/22/2016	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	8/22/2016	Occupied 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.
5	8/22/2016	Spurious Emissions at the Antenna Terminals	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	8/22/2016	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.
7	8/23/2016	Intermodulation	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	8/24/2016	Out of Band Emissions – LITE Band 2	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.
9	9/22/2016	Equivalent Isotropic Radiated Power (EIRP)	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.
10	9/22/2016	Peak To Average Ratio	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.
11	9/22/2016	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.
12	9/22/2016	Occupied 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.
13	9/22/2016	Spurious Emissions at the Antenna Terminals	Tested as delivered to Test Station.	For mid channel a tunable notch filter was used to allow proper noise floor sensitivity, total offset including filter = 58.6dB for mid channel. Approved by Edward Lee.	EUT remained at Northwest EMC following the test.
14	9/22/2016	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.

MODIFICATIONS

NORTHWEST EMC
2014-12-10

15	9/22/2016	Intermodulation	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.
16	9/23/2016	Out of Band Emissions – LITE Band 2	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

OUT OF BAND EMISSIONS - LTE BAND 2

NORTHWEST EMC
PSA-ESCI 2016.04.26.1

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

Transmitting at LTE5, Low Ch(1932.5MHZ), Mid Ch(1960MHz), High Ch(1987.5MHz)
Transmitting at LTE10, Low Ch(1935MHZ), Mid Ch(1960MHz), High Ch(1985MHz)
Transmitting at LTE20, Low Ch(1940MHZ), Mid Ch(1960MHz), High Ch(1980MHz)

POWER SETTINGS INVESTIGATED

48VDC

CONFIGURATIONS INVESTIGATED

KMWC0073 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	20000 MHz

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
Filter - Low Pass	Micro-Tronics	LPM50003	HGO	3/28/2016	12 mo
Attenuator	S.M. Electronics	SA6-20	REO	3/28/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	JSDWK42-18004000-60-5P	PAN	1/6/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	PAD	8/15/2016	12 mo
Cable	ESM Cable Corp.	8-18GHz cables	OCY	8/15/2016	12 mo
Cable	ESM Cable Corp.	1-8GHz cables	OCX	8/15/2016	12 mo
Cable	ESM Cable Corp.	30-1GHz cables	OCW	8/15/2016	12 mo
Cable	D-Coax	None	OC4	3/31/2016	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HGQ	3/28/2016	12 mo
Filter - Low Pass	Micro-Tronics	LPM50004	HGK	3/28/2016	12 mo
Antenna - Double Ridge	A.H. Systems, Inc.	SAS-574	AXV	5/3/2016	24 mo
Antenna - Biconilog	EMCO	3142	AXB	11/6/2015	24 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	8/15/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	8/15/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	8/15/2016	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIR	6/23/2016	24 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	0 mo
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	0 mo
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	11/5/2015	12 mo

TEST DESCRIPTION

The EUT was tested with shielded terminations on the RF output ports instead of antennas.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. This method was also used to meet the Industry Canada requirements for licensed radios. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

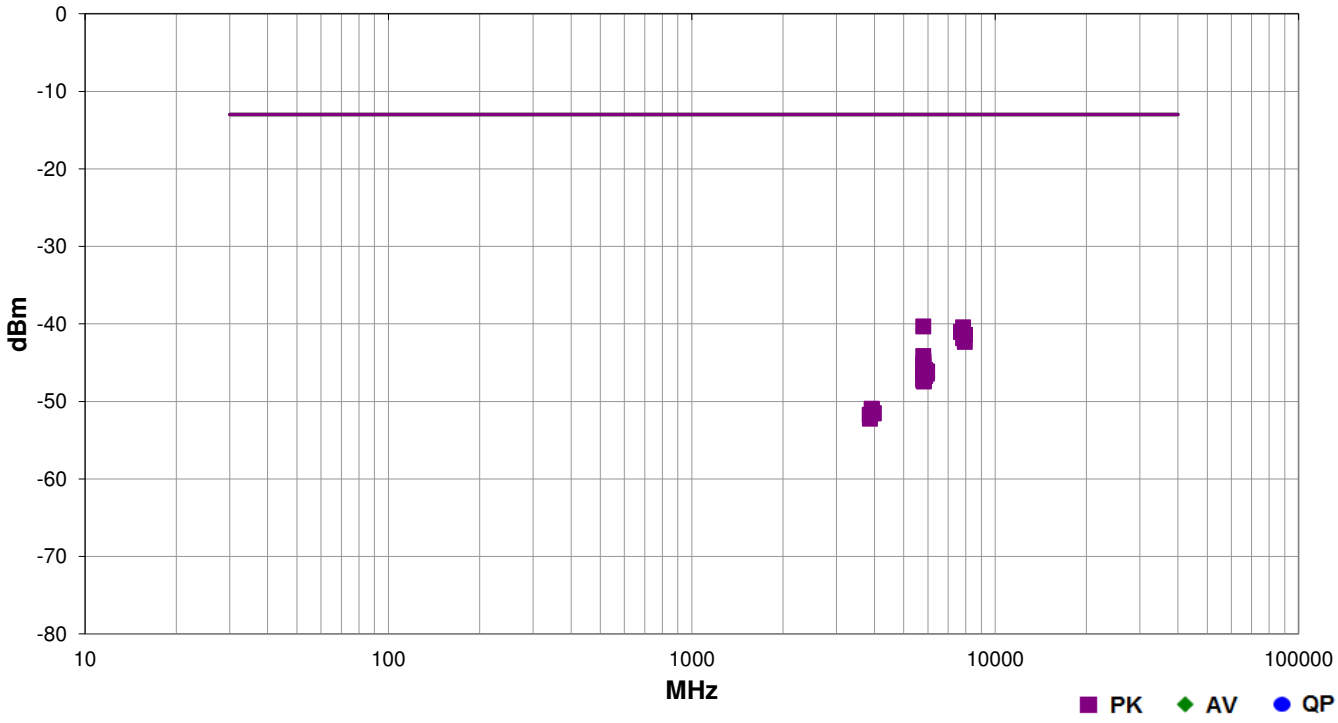
OUT OF BAND EMISSIONS - LTE BAND 2

PSA-ESCI 2016.04.26.1
EmiR5 2016.04.26.1

Work Order:	KMWC0073	**Date:**	08/24/16		
Project:	None	**Temperature:**	21.7 °C		
Job Site:	OC07	**Humidity:**	47% RH		
Serial Number:	K163000003	**Barometric Pres.:**	1019 mbar	**Tested by:**	Mike Tran
EUT:	CWS-3050-02				
Configuration:	2				
Customer:	Parallel Wireless Inc.				
Attendees:	Andy				
EUT Power:	48VDC				
Operating Mode:	Transmitting at LTE5, Low Ch(1932.5MHZ), Mid Ch(1960MHz), High Ch(1987.5MHz) Transmitting at LTE10, Low Ch(1935MHZ), Mid Ch(1960MHz), High Ch(1985MHz) Transmitting at LTE20, Low Ch(1940MHZ), Mid Ch(1960MHz), High Ch(1980MHz)				
Deviations:	None				
Comments:	2x40W				

Test Specifications	**Test Method**
FCC 24.238:2016	ANSI/TIA/EIA-603-D-2010

Run #	16	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	5796.142	1.0	319.0	Horz	PK	9.27E-08	-40.3	-13.0	-27.3	Low Ch, EUT Vert, LTE5
	7841.850	1.0	16.0	Vert	PK	9.06E-08	-40.4	-13.0	-27.4	Mid Ch, EUT on Side, LTE5
	7728.167	2.6	360.0	Vert	PK	7.89E-08	-41.0	-13.0	-28.0	Low Ch, EUT on Side, LTE5
	7728.500	1.0	113.0	Horz	PK	7.89E-08	-41.0	-13.0	-28.0	Low Ch, EUT Vert, LTE5
	7949.117	1.1	215.0	Vert	PK	7.20E-08	-41.4	-13.0	-28.4	High Ch, EUT on Side, LTE5
	7840.175	1.6	308.0	Horz	PK	6.56E-08	-41.8	-13.0	-28.8	Mid Ch, EUT Vert, LTE5
	7948.150	1.0	125.0	Horz	PK	5.85E-08	-42.3	-13.0	-29.3	High Ch, EUT Vert, LTE5

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	5798.050	1.0	258.0	Horz	PK	3.86E-08	-44.1	-13.0	-31.1	Low Ch, EUT Vert, LTE5, Dual Carrier
	5804.950	1.0	315.0	Horz	PK	3.29E-08	-44.8	-13.0	-31.8	Low Ch, EUT Vert, LTE10
	5795.700	3.3	360.0	Horz	PK	2.93E-08	-45.3	-13.0	-32.3	Low Ch, EUT Horz, LTE5
	5798.100	1.1	285.0	Vert	PK	2.93E-08	-45.3	-13.0	-32.3	Low Ch, EUT on Side, LTE5
	5880.917	1.0	326.0	Horz	PK	2.55E-08	-45.9	-13.0	-32.9	Mid Ch, EUT Vert, LTE5
	5965.392	1.0	183.0	Horz	PK	2.44E-08	-46.1	-13.0	-33.1	High Ch, EUT Vert, LTE5
	5798.117	1.0	229.0	Vert	PK	2.28E-08	-46.4	-13.0	-33.4	Low Ch, EUT Horz, LTE5
	5963.367	4.0	26.0	Vert	PK	2.28E-08	-46.4	-13.0	-33.4	High Ch, EUT on Side, LTE5
	5797.808	1.0	201.0	Vert	PK	2.28E-08	-46.4	-13.0	-33.4	Low Ch, EUT on Side, LTE5, Dual Carrier
	5819.608	1.0	256.0	Horz	PK	2.28E-08	-46.4	-13.0	-33.4	Low Ch, EUT Vert, LTE20
	5877.842	1.0	2.0	Vert	PK	2.12E-08	-46.7	-13.0	-33.7	Mid Ch, EUT on Side, LTE5
	5795.625	2.3	0.0	Horz	PK	1.98E-08	-47.0	-13.0	-34.0	Low Ch, EUT on Side, LTE5
	5800.008	1.0	33.0	Vert	PK	1.89E-08	-47.2	-13.0	-34.2	Low Ch, EUT Vert, LTE5
	5802.742	1.0	281.0	Vert	PK	1.85E-08	-47.3	-13.0	-34.3	Low Ch, EUT on Side, LTE10
	5822.125	1.0	360.0	Vert	PK	1.81E-08	-47.4	-13.0	-34.4	Low Ch, EUT on Side, LTE20
	3919.325	1.0	224.0	Horz	PK	8.07E-09	-50.9	-13.0	-37.9	Mid Ch, EUT Vert, LTE5
	3920.917	1.0	114.0	Vert	PK	7.89E-09	-51.0	-13.0	-38.0	Mid Ch, EUT on Side, LTE5
	3974.933	1.0	99.0	Vert	PK	7.03E-09	-51.5	-13.0	-38.5	High Ch, EUT on Side, LTE5
	3974.708	1.9	282.0	Horz	PK	7.03E-09	-51.5	-13.0	-38.5	High Ch, EUT Vert, LTE5
	3862.608	1.7	11.0	Horz	PK	6.72E-09	-51.7	-13.0	-38.7	Low Ch, EUT Vert, LTE5
	3865.575	1.0	347.0	Vert	PK	5.99E-09	-52.2	-13.0	-39.2	Low Ch, EUT on Side, LTE5

OUT OF BAND EMISSIONS - WCDMA

PSA-ESCI 2016.07.22

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

Transmitting at WCDMA, Low Ch(1932.4MHZ), Mid Ch(1960MHz), High Ch(1987.6MHz)

POWER SETTINGS INVESTIGATED

48VDC

CONFIGURATIONS INVESTIGATED

KMWC0076 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	20000 MHz

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
Filter - Low Pass	Micro-Tronics	LPM50003	HGO	3/28/2016	12 mo
Attenuator	S.M. Electronics	SA6-20	REO	3/28/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	JSDWK42-18004000-60-5P	PAN	1/6/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	PAD	8/15/2016	12 mo
Cable	ESM Cable Corp.	8-18GHz cables	OCY	9/19/2016	12 mo
Cable	ESM Cable Corp.	1-8GHz cables	OCX	9/19/2016	12 mo
Cable	ESM Cable Corp.	30-1GHz cables	OCW	9/19/2016	12 mo
Cable	D-Coax	None	OC4	3/31/2016	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HGQ	3/28/2016	12 mo
Filter - Low Pass	Micro-Tronics	LPM50004	HGK	3/28/2016	12 mo
Antenna - Double Ridge	A.H. Systems, Inc.	SAS-574	AXV	5/3/2016	24 mo
Antenna - Biconilog	EMCO	3142	AXB	11/6/2015	24 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVP	8/15/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	8/15/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	8/15/2016	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIR	6/23/2016	24 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHX	NCR	0 mo
Antenna - Standard Gain	EMCO	3160-08	AHK	NCR	0 mo
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	11/5/2015	12 mo

TEST DESCRIPTION

The EUT was tested with shielded terminations on the RF output ports instead of antennas.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. This method was also used to meet the Industry Canada requirements for licensed radios. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

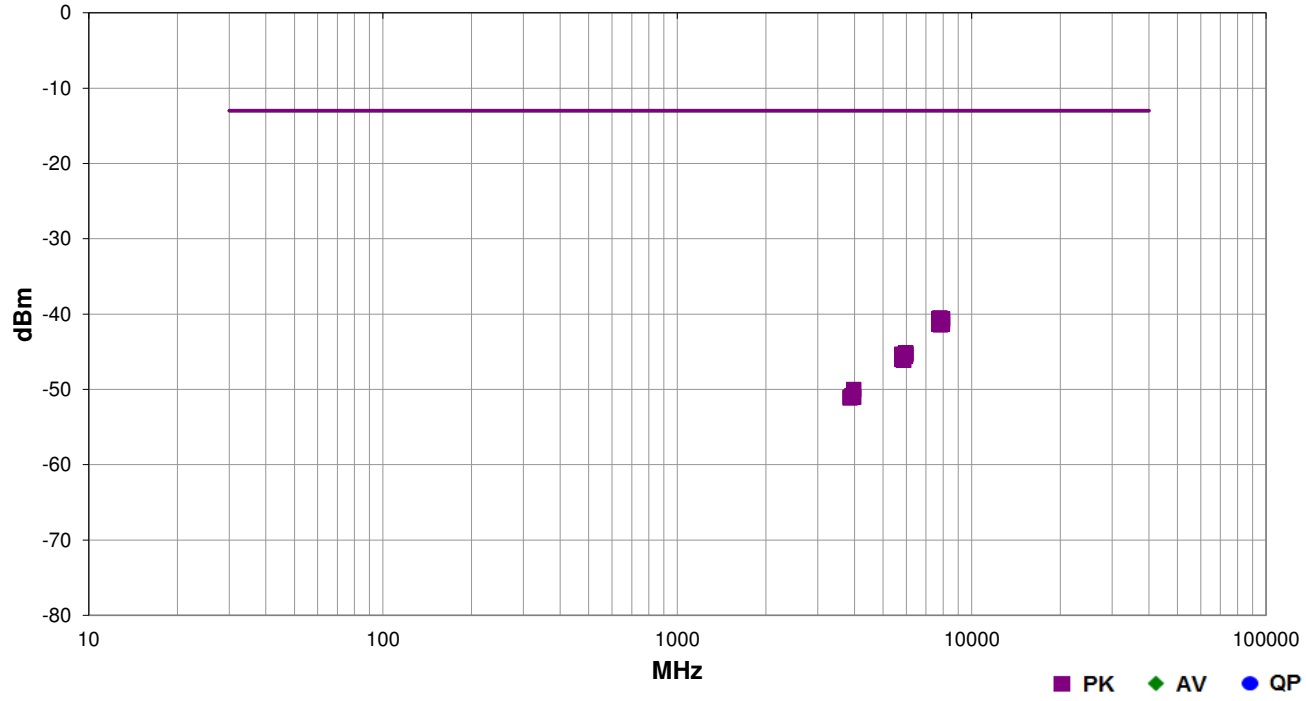
OUT OF BAND EMISSIONS - WCDMA

PSA-ESCI 2016.07.22
EmiR5 2016.07.22.1

Work Order:	KMWC0076	**Date:**	09/23/16		
Project:	None	**Temperature:**	20.5 °C		
Job Site:	OC07	**Humidity:**	45% RH		
Serial Number:	K163000003	**Barometric Pres.:**	1018 mbar	**Tested by:**	Mike Tran
EUT:	CWS-3050-02				
Configuration:	2				
Customer:	Parallel Wireless Inc.				
Attendees:	Edward Lee				
EUT Power:	48VDC				
Operating Mode:	Transmitting at WCDMA, Low Ch(1932.4MHZ), Mid Ch(1960MHz), High Ch(1987.6MHz)				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 24.238:2016	ANSI/TIA/EIA-603-D-2010

Run #	20	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	7791.010	1.0	314.0	Vert	PK	8.85E-08	-40.5	-13.0	-27.5	Dual Carriers, LTE5+WCDMA, EUT on Side
	7810.845	1.0	314.0	Vert	PK	8.85E-08	-40.5	-13.0	-27.5	Dual Carriers, LTE10+WCDMA, EUT on Side
	7950.535	1.0	314.0	Vert	PK	8.65E-08	-40.6	-13.0	-27.6	High Ch, WCDMA, EUT on Side
	7730.980	1.0	314.0	Vert	PK	8.65E-08	-40.6	-13.0	-27.6	Dual Carriers, WCDMA+WCDMA, EUT on Side
	7889.270	1.0	314.0	Vert	PK	8.65E-08	-40.6	-13.0	-27.6	Dual Carriers, WCDMA+WCDMA, EUT on Side
	7948.780	1.0	314.0	Vert	PK	8.65E-08	-40.6	-13.0	-27.6	Dual Carriers, LTE10+WCDMA, EUT on Side
	7950.125	1.0	248.0	Horz	PK	8.07E-08	-40.9	-13.0	-27.9	High Ch, WCDMA, EUT Vert
	7842.125	1.1	98.0	Horz	PK	7.71E-08	-41.1	-13.0	-28.1	Mid Ch, WCDMA, EUT Vert
	7729.040	1.0	314.0	Vert	PK	7.71E-08	-41.1	-13.0	-28.1	Dual Carriers, WCDMA+LTE20, EUT on Side
	7729.725	1.0	312.0	Vert	PK	7.36E-08	-41.3	-13.0	-28.3	Low Ch, WCDMA, EUT on Side

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	7730.142	3.1	263.0	Horz	PK	7.36E-08	-41.3	-13.0	-28.3	Low Ch, WCDMA, EUT Vert
	7950.705	1.0	314.0	Vert	PK	7.36E-08	-41.3	-13.0	-28.3	Dual Carriers, LTE5+WCDMA, EUT on Side
	7850.725	1.0	314.0	Vert	PK	7.36E-08	-41.3	-13.0	-28.3	Dual Carriers, WCDMA+LTE20, EUT on Side
	7841.075	2.1	322.0	Vert	PK	7.20E-08	-41.4	-13.0	-28.4	Mid Ch, WCDMA, EUT on Side
	5963.035	2.0	297.0	Vert	PK	3.07E-08	-45.1	-13.0	-32.1	High Ch, WCDMA, EUT on Side
	5962.605	1.0	297.0	Horz	PK	3.00E-08	-45.2	-13.0	-32.2	High Ch, WCDMA, EUT Vert
	5961.990	2.6	143.0	Vert	PK	3.00E-08	-45.2	-13.0	-32.2	High Ch, WCDMA, EUT Vert
	5964.140	3.1	85.0	Horz	PK	2.93E-08	-45.3	-13.0	-32.3	High Ch, WCDMA, EUT Horz
	5795.542	1.0	291.0	Vert	PK	2.93E-08	-45.3	-13.0	-32.3	Low Ch, WCDMA, EUT on Side
	5963.760	2.8	78.0	Vert	PK	2.86E-08	-45.4	-13.0	-32.4	High Ch, WCDMA, EUT Horz
	5961.725	2.1	194.0	Horz	PK	2.74E-08	-45.6	-13.0	-32.6	High Ch, WCDMA, EUT on Side
	5882.275	1.9	244.0	Horz	PK	2.74E-08	-45.6	-13.0	-32.6	Mid Ch, WCDMA, EUT Vert
	5796.942	2.1	260.0	Horz	PK	2.50E-08	-46.0	-13.0	-33.0	Low Ch, WCDMA, EUT Vert
	5877.542	1.0	16.0	Vert	PK	2.44E-08	-46.1	-13.0	-33.1	Mid Ch, WCDMA, EUT on Side
	3976.480	1.0	17.0	Vert	PK	9.93E-09	-50.0	-13.0	-37.0	High Ch, WCDMA, EUT on Side
	3922.150	3.6	360.0	Horz	PK	8.26E-09	-50.8	-13.0	-37.8	Mid Ch, WCDMA, EUT Vert
	3919.542	1.2	72.0	Vert	PK	8.07E-09	-50.9	-13.0	-37.9	Mid Ch, WCDMA, EUT on Side
	3974.455	1.9	65.0	Horz	PK	7.89E-09	-51.0	-13.0	-38.0	High Ch, WCDMA, EUT Vert
	3864.358	2.9	360.0	Horz	PK	7.89E-09	-51.0	-13.0	-38.0	Low Ch, WCDMA, EUT Vert
	3864.292	1.0	121.0	Vert	PK	7.71E-09	-51.1	-13.0	-38.1	Low Ch, WCDMA, EUT on Side

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - LTE BAND 2

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Meter - Power	ETS Lindgren	7002-006	SRB	12/14/2015	12/14/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. This was used to verify the cable offset.

The RF output power was measured with the EUT set to the modes called out in the datasheet. The power measurement was made using a direct connection between the RF output of the EUT and an RF Power Sensor which only measures across the high time of the burst of the carrier.

The observed duty cycle was noted but not needed to calculate the EiRP.

EIRP = Max Measured Power + Antenna gain (dBi)

The measurements from Port 0 and Port 1 were summed to determine the total average power in EIRP.

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0073
Serial Number:	K163000003			**Date:**	08/23/16
Customer:	KMW Communications			**Temperature:**	22.1 °C
Attendees:	Andy Ku			**Humidity:**	47.8% RH
Project:	None			**Barometric Pres.:**	1014 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

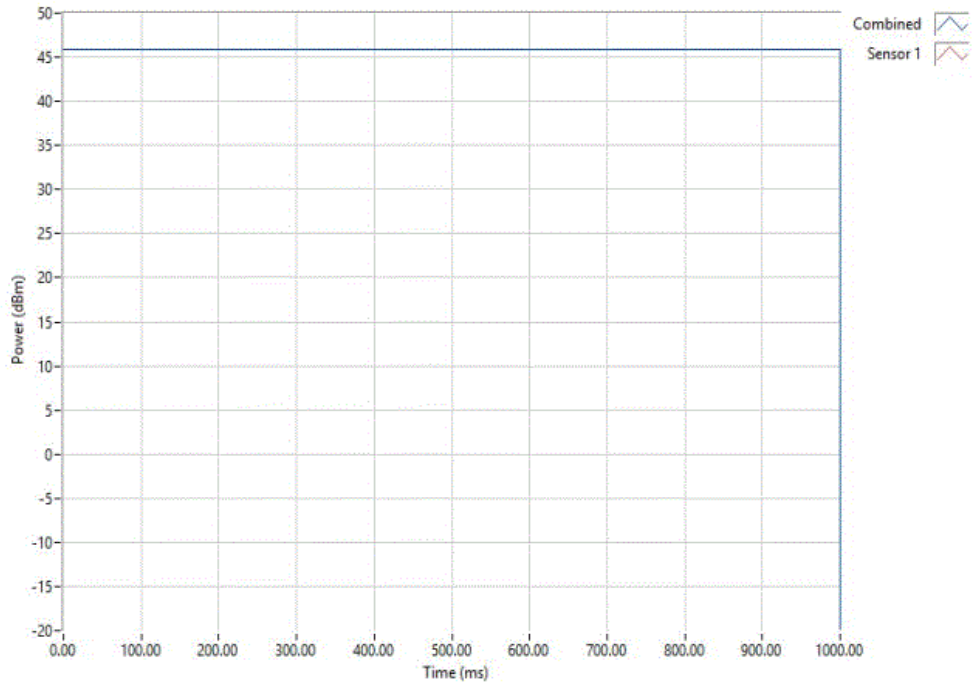
DEVIATIONS FROM TEST STANDARD

None

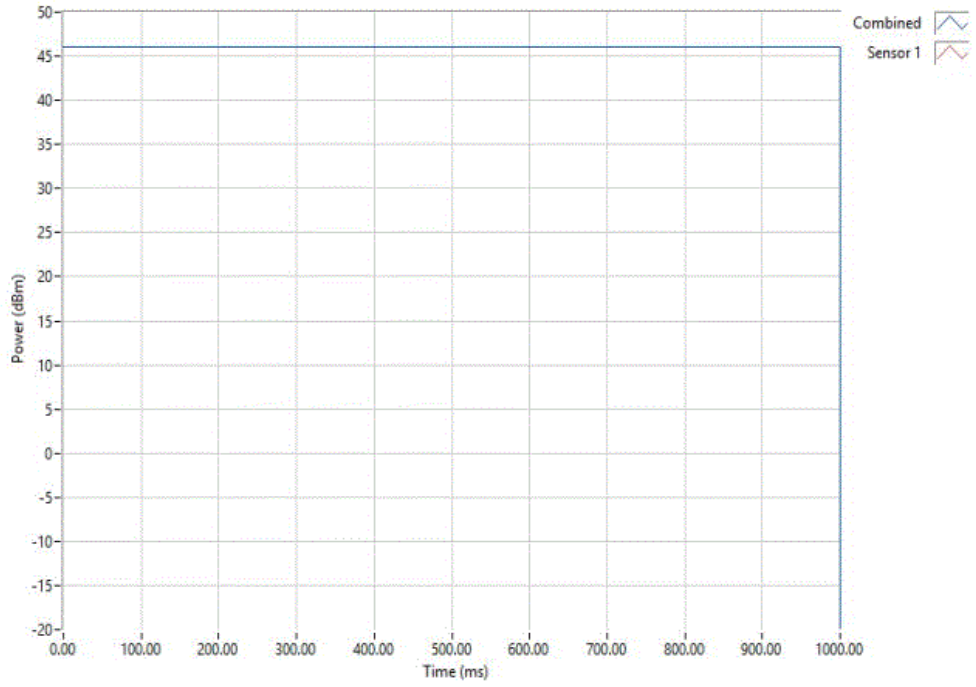
Configuration #	1	Signature

		Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
Antenna Port 1							
	Low Channel LTE5, 1932.5 MHz	45.84	100	0	45.8	1640	Pass
	Mid Channel LTE5, 1960 MHz	45.98	100	0	46	1640	Pass
	High Channel LTE5, 1987.5 MHz	45.93	100	0	45.9	1640	Pass
	Low Channel LTE10, 1935 MHz	46	100	0	46	1640	Pass
	Mid Channel LTE10, 1960 MHz	46	100	0	46	1640	Pass
	High Channel LTE10, 1985 MHz	45.98	100	0	46	1640	Pass
	Low Channel LTE20, 1940 MHz	45.95	100	0	46	1640	Pass
	Mid Channel LTE20, 1960 MHz	45.97	100	0	46	1640	Pass
	High Channel LTE20, 1980 MHz	45.98	100	0	46	1640	Pass
Antenna Port 2							
	Low Channel LTE5, 1932.5 MHz	46	100	0	46	1640	Pass
	Mid Channel LTE5, 1960 MHz	45.98	100	0	46	1640	Pass
	High Channel LTE5, 1987.5 MHz	45.94	100	0	45.9	1640	Pass
	Low Channel LTE10, 1935 MHz	45.98	100	0	46	1640	Pass
	Mid Channel LTE10, 1960 MHz	45.94	100	0	45.9	1640	Pass
	High Channel LTE10, 1985 MHz	45.92	100	0	45.9	1640	Pass
	Low Channel LTE20, 1940 MHz	45.98	100	0	46	1640	Pass
	Mid Channel LTE20, 1960 MHz	45.97	100	0	46	1640	Pass
	High Channel LTE20, 1980 MHz	45.99	100	0	46	1640	Pass
Antenna Port 1 MIMO							
	Low Channel LTE5, 1932.5 MHz	45.96	100	0	46	1640	Pass
	Mid Channel LTE5, 1960 MHz	45.98	100	0	46	1640	Pass
	High Channel LTE5, 1987.5 MHz	45.99	100	0	46	1640	Pass
	Low Channel LTE10, 1935 MHz	45.94	100	0	45.9	1640	Pass
	Mid Channel LTE10, 1960 MHz	45.95	100	0	46	1640	Pass
	High Channel LTE10, 1985 MHz	45.95	100	0	46	1640	Pass
	Low Channel LTE20, 1940 MHz	45.97	100	0	46	1640	Pass
	Mid Channel LTE20, 1960 MHz	45.99	100	0	46	1640	Pass
	High Channel LTE20, 1980 MHz	45.95	100	0	46	1640	Pass
Antenna Port 2 MIMO							
	Low Channel LTE5, 1932.5 MHz	45.95	100	0	46	1640	Pass
	Mid Channel LTE5, 1960 MHz	46	100	0	46	1640	Pass
	High Channel LTE5, 1987.5 MHz	45.95	100	0	46	1640	Pass
	Low Channel LTE10, 1935 MHz	45.97	100	0	46	1640	Pass
	Mid Channel LTE10, 1960 MHz	45.96	100	0	46	1640	Pass
	High Channel LTE10, 1985 MHz	45.94	100	0	45.9	1640	Pass
	Low Channel LTE20, 1940 MHz	45.97	100	0	46	1640	Pass
	Mid Channel LTE20, 1960 MHz	45.98	100	0	46	1640	Pass
	High Channel LTE20, 1980 MHz	45.99	100	0	46	1640	Pass

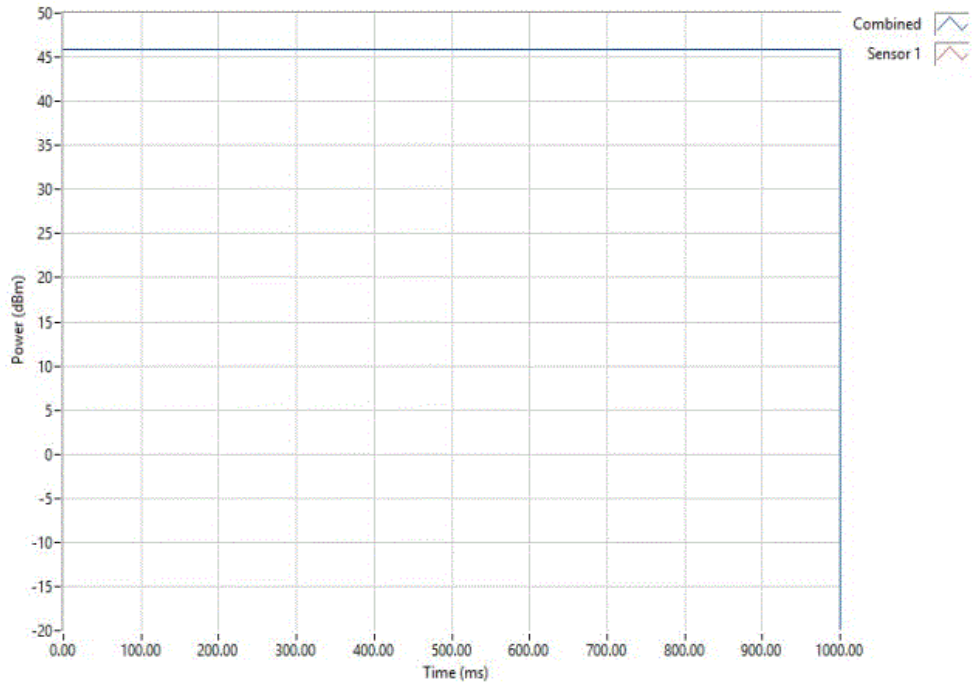
Antenna Port 1, Low Channel LTE5, 1932.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.84	100	0	45.8	1640	Pass



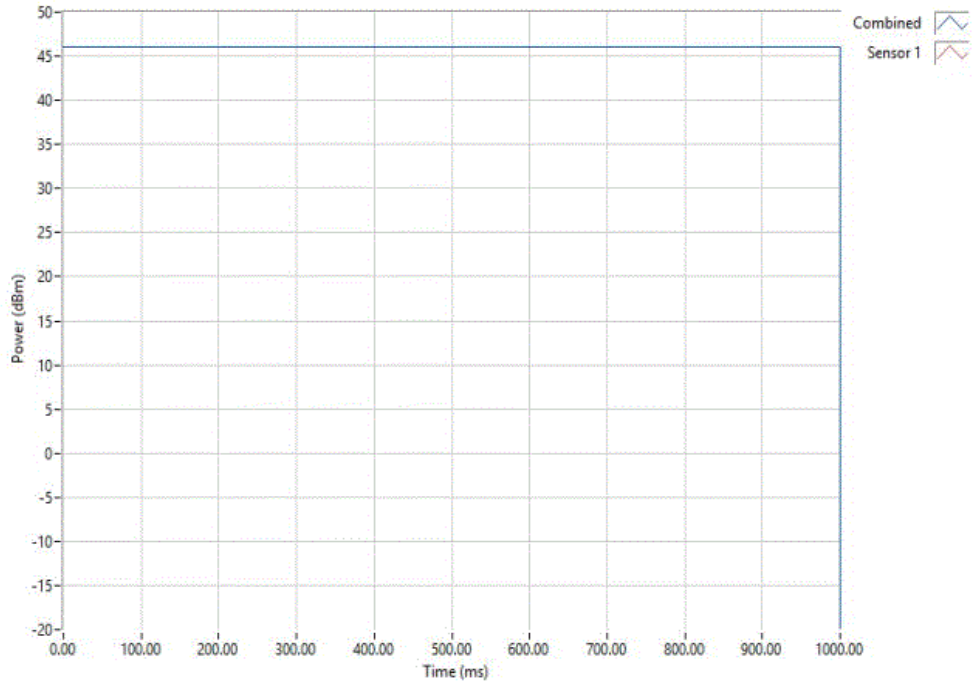
Antenna Port 1, Mid Channel LTE5, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



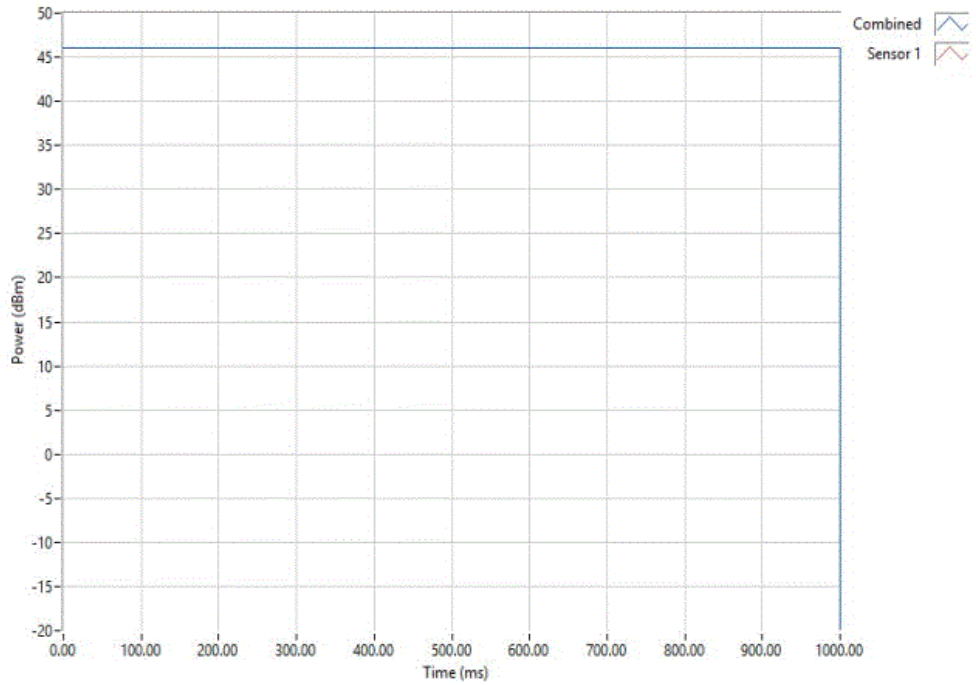
Antenna Port 1, High Channel LTE5, 1987.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.93	100	0	45.9	1640	Pass



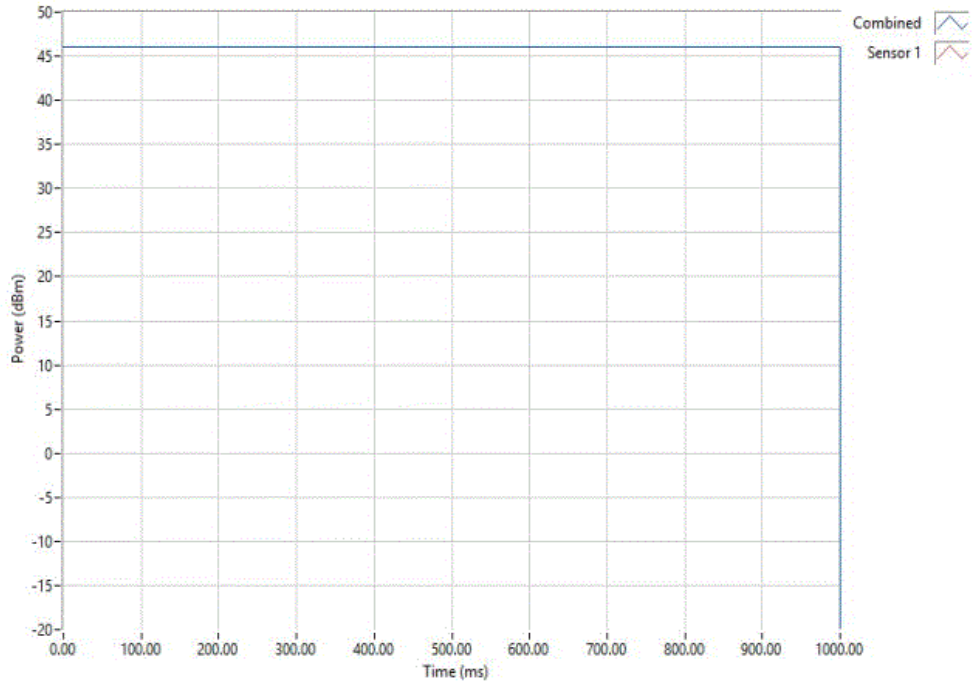
Antenna Port 1, Low Channel LTE10, 1935 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	46	100	0	46	1640	Pass



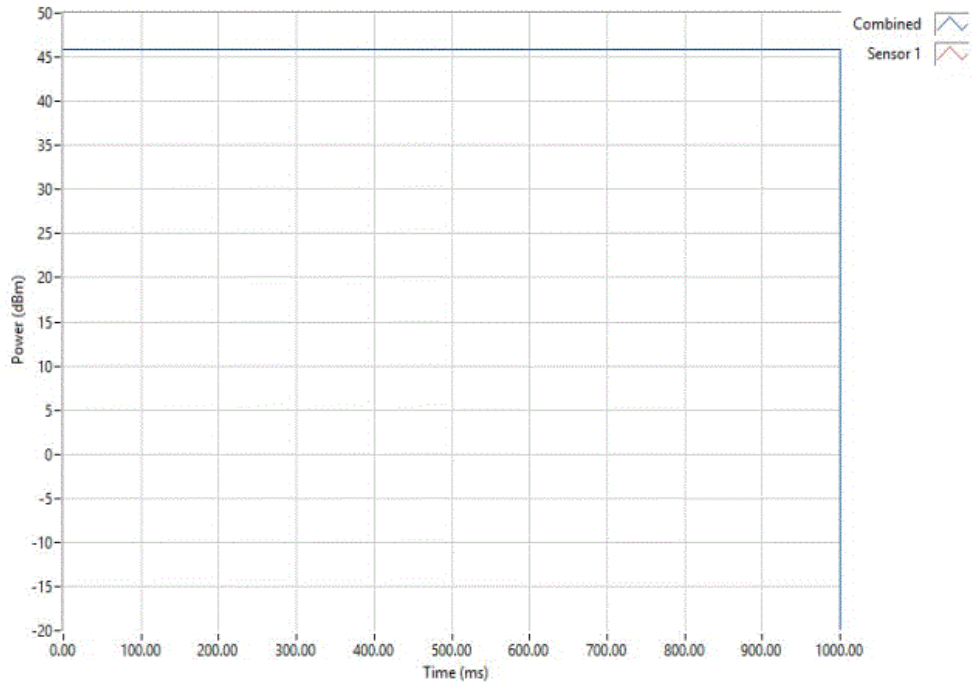
Antenna Port 1, Mid Channel LTE10, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	46	100	0	46	1640	Pass



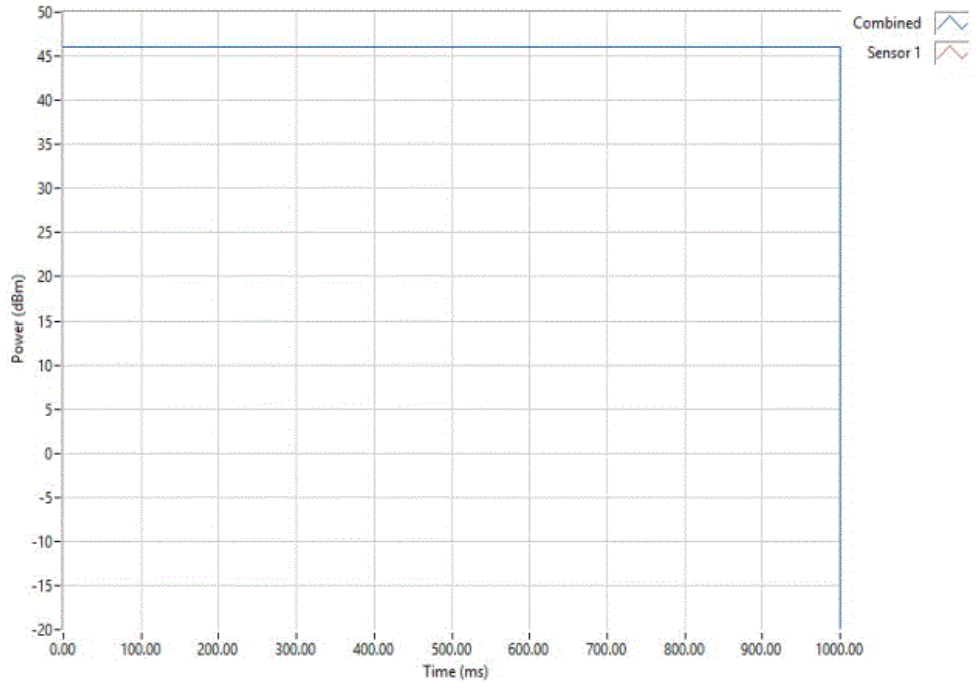
Antenna Port 1, High Channel LTE10, 1985 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



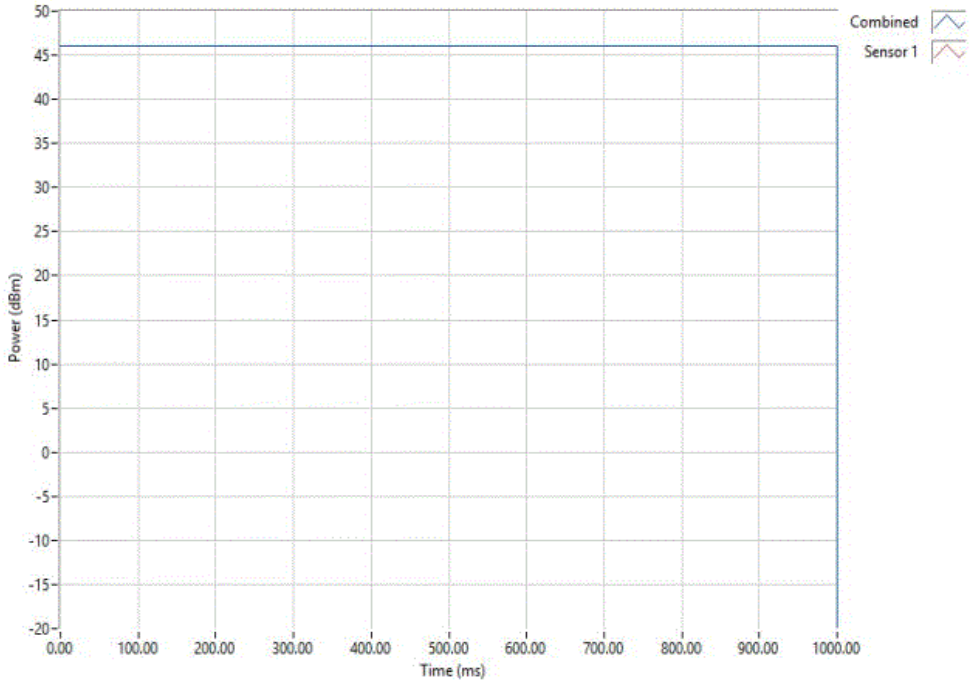
Antenna Port 1, Low Channel LTE20, 1940 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.95	100	0	46	1640	Pass



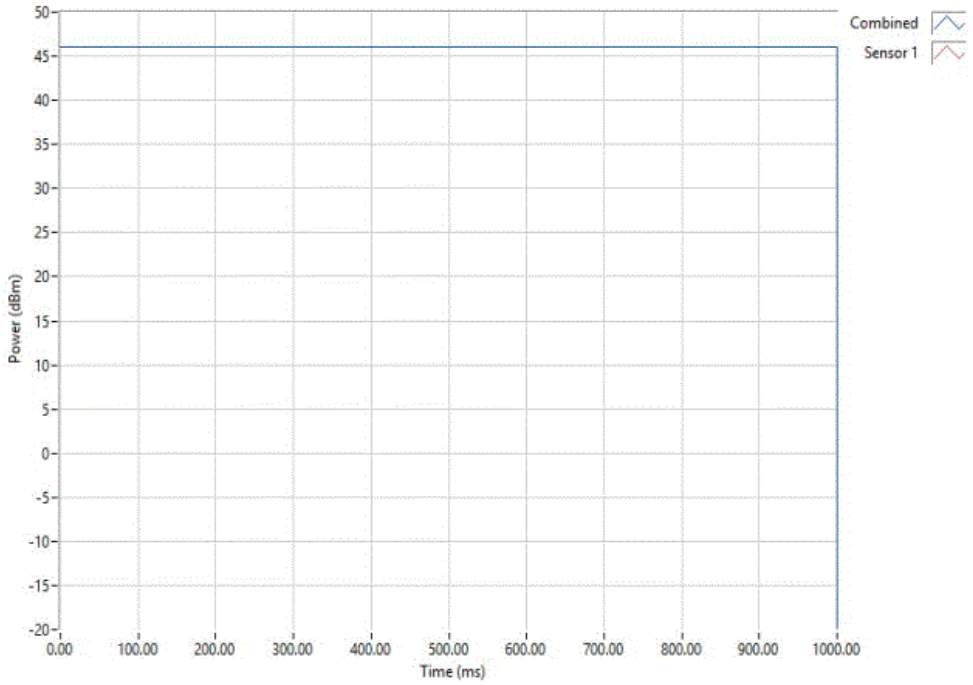
Antenna Port 1, Mid Channel LTE20, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.97	100	0	46	1640	Pass



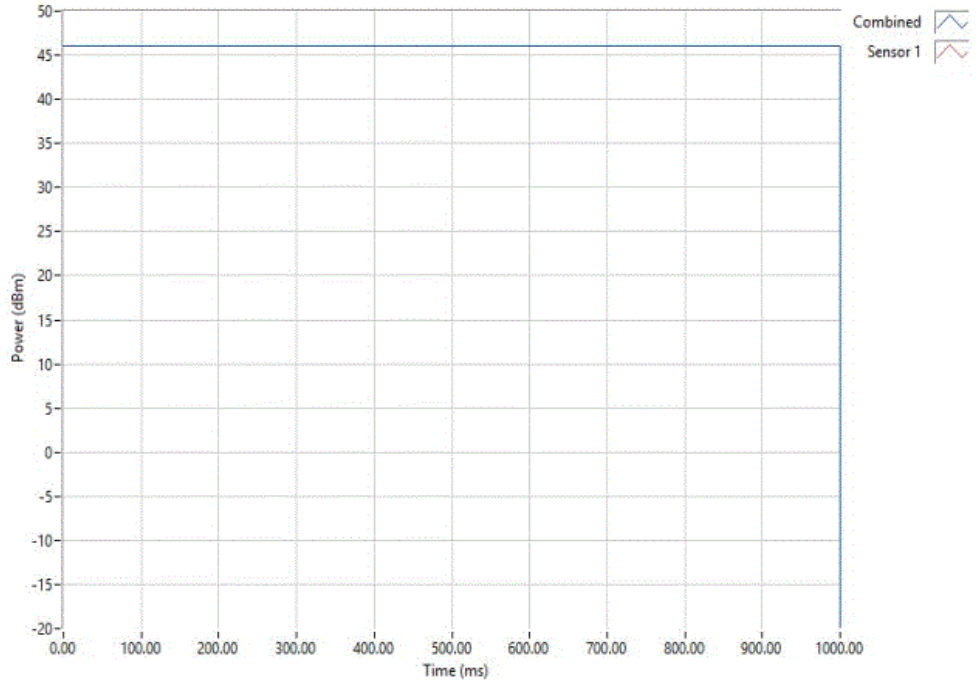
Antenna Port 1, High Channel LTE20, 1980 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



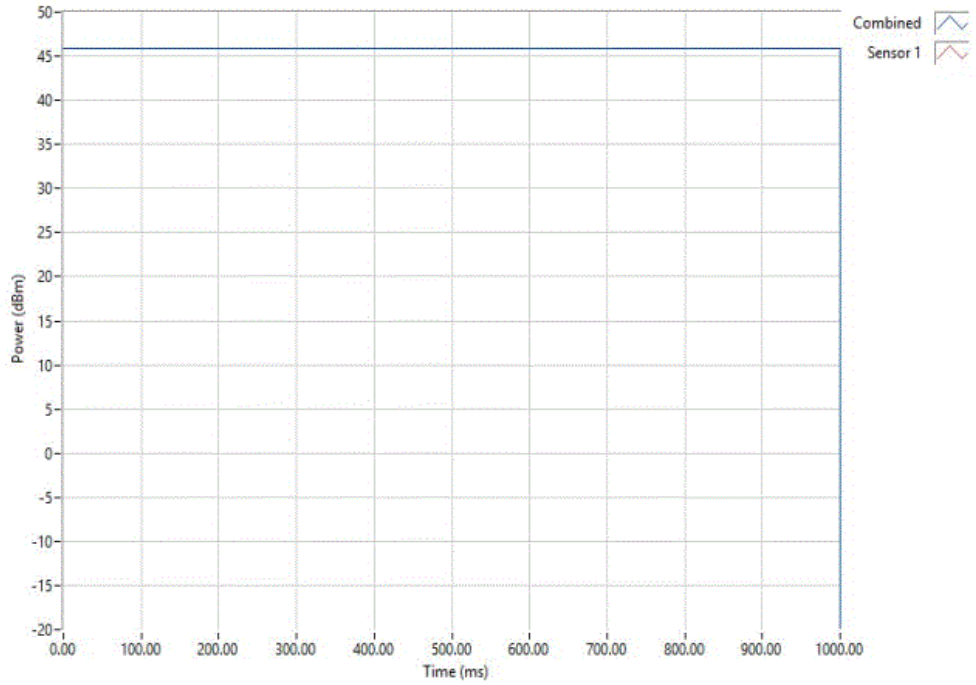
Antenna Port 2, Low Channel LTE5, 1932.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	46	100	0	46	1640	Pass



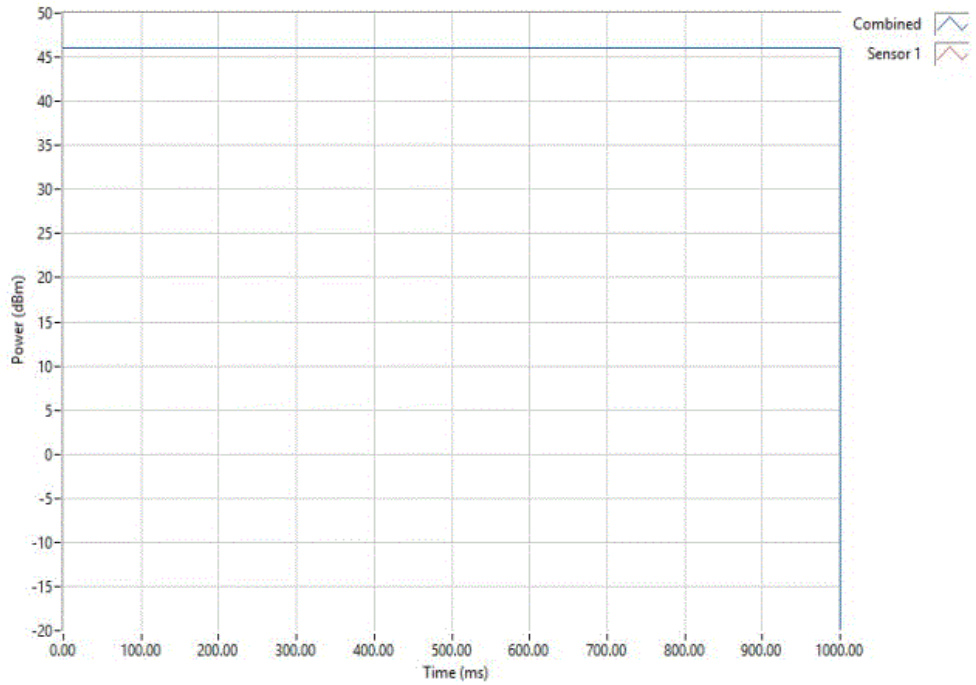
Antenna Port 2, Mid Channel LTE5, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



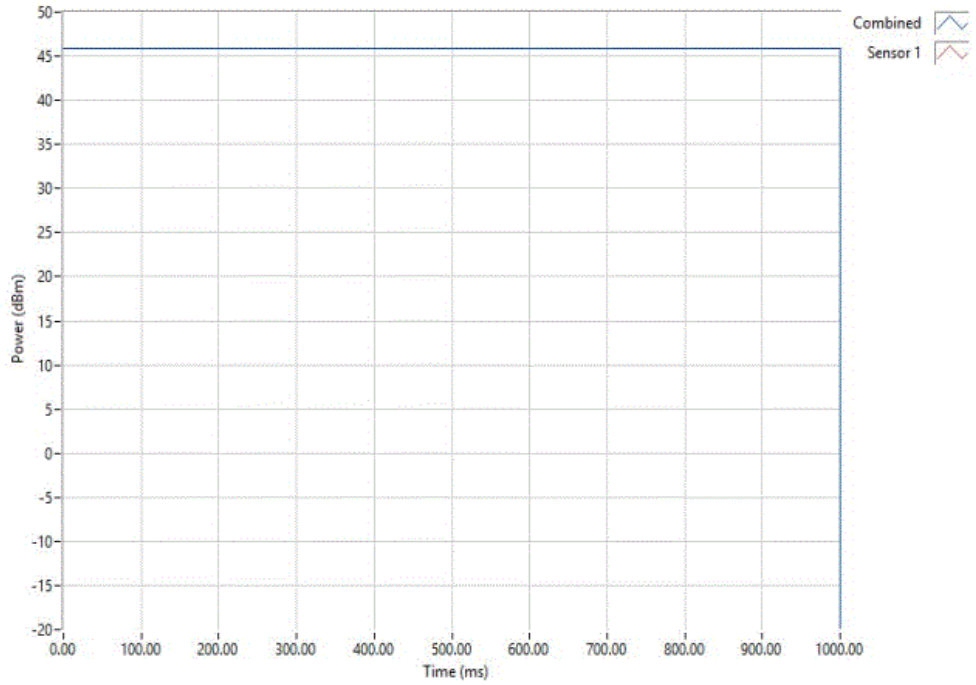
Antenna Port 2, High Channel LTE5, 1987.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.94	100	0	45.9	1640	Pass



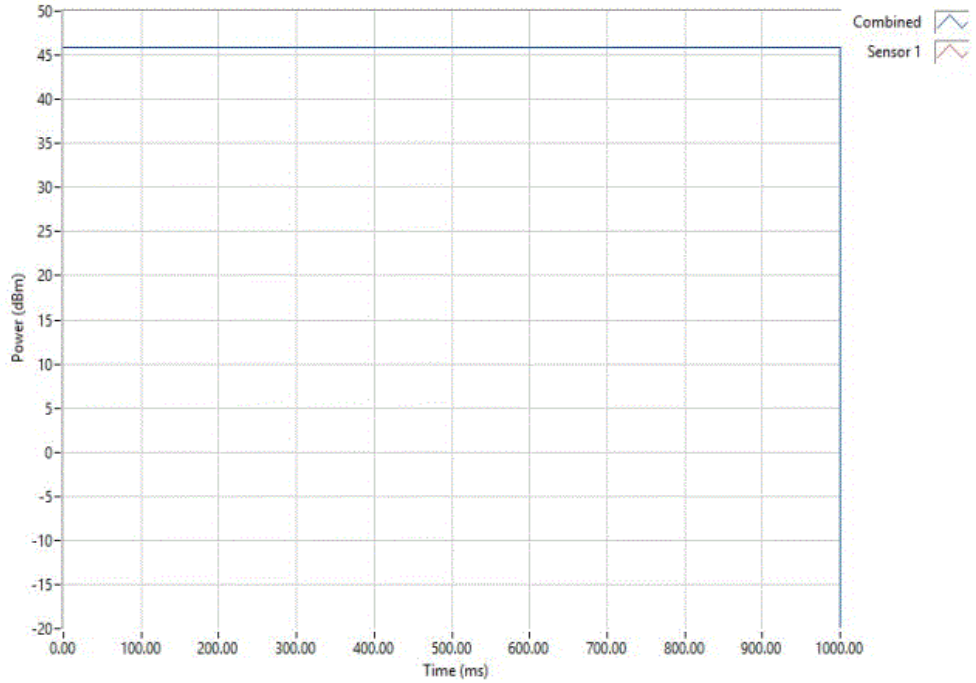
Antenna Port 2, Low Channel LTE10, 1935 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



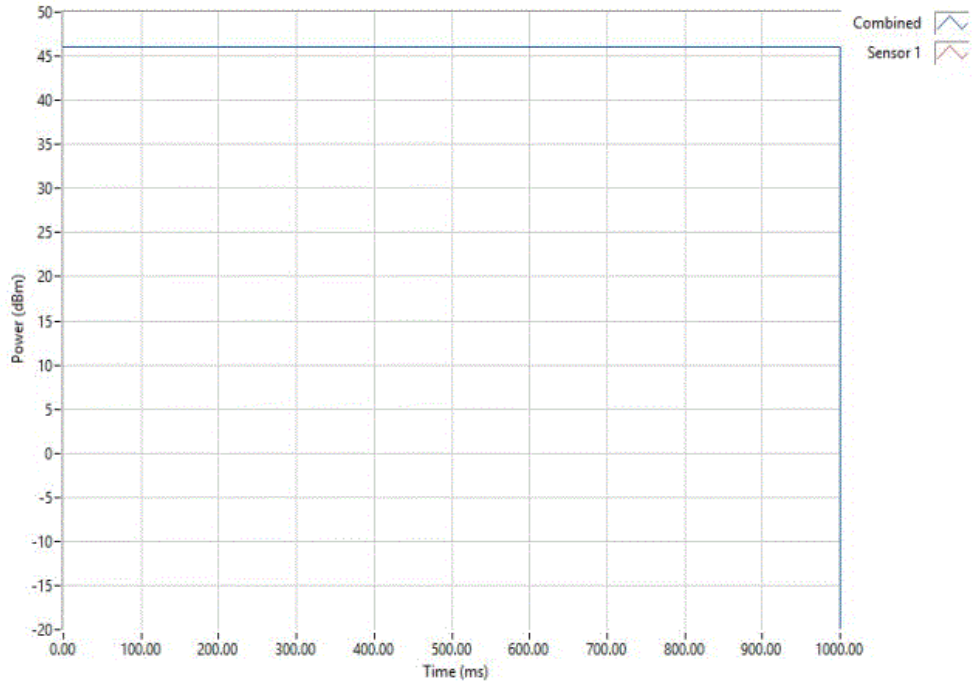
Antenna Port 2, Mid Channel LTE10, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.94	100	0	45.9	1640	Pass



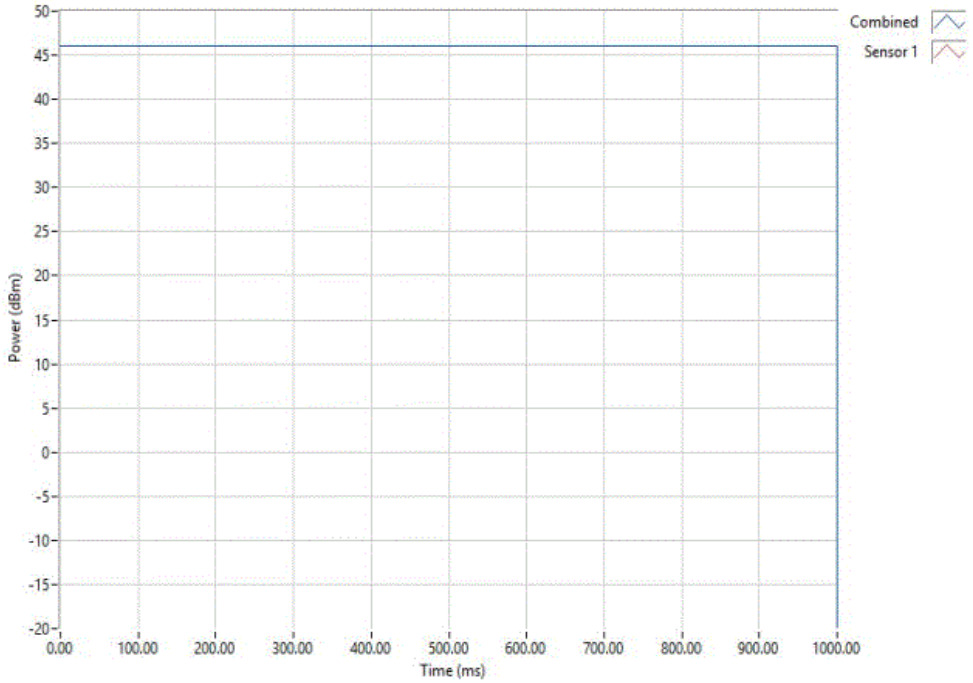
Antenna Port 2, High Channel LTE10, 1985 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.92	100	0	45.9	1640	Pass



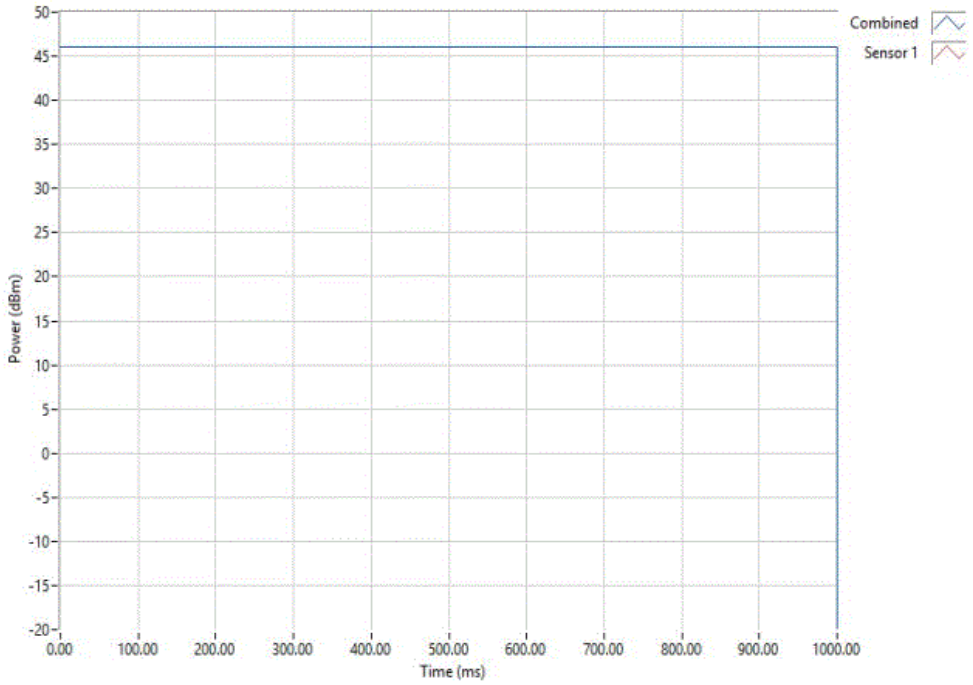
Antenna Port 2, Low Channel LTE20, 1940 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



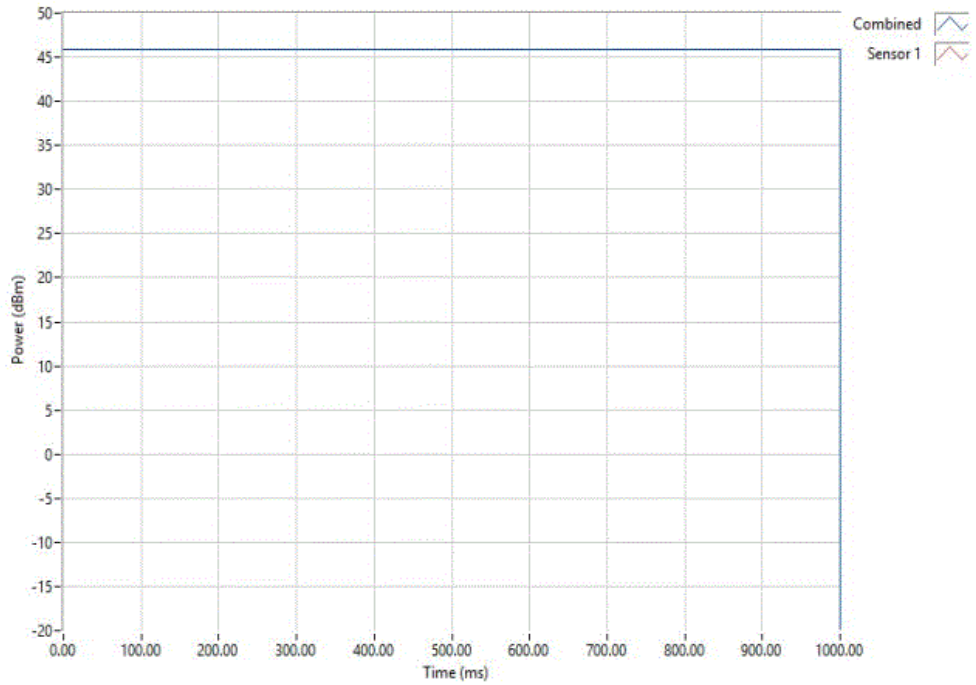
Antenna Port 2, Mid Channel LTE20, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.97	100	0	46	1640	Pass



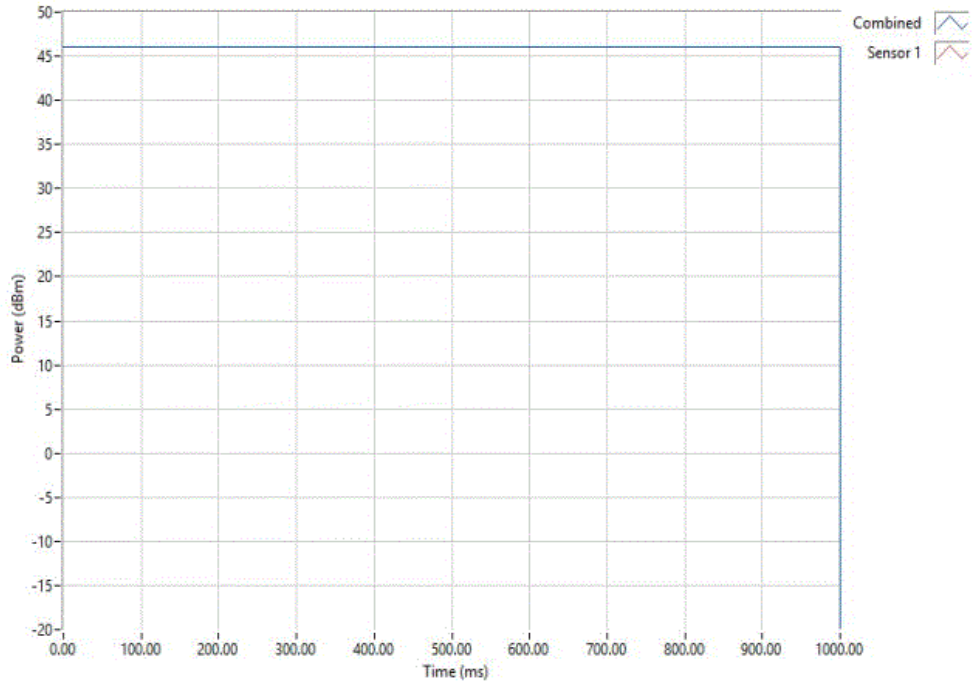
Antenna Port 2, High Channel LTE20, 1980 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.99	100	0	46	1640	Pass



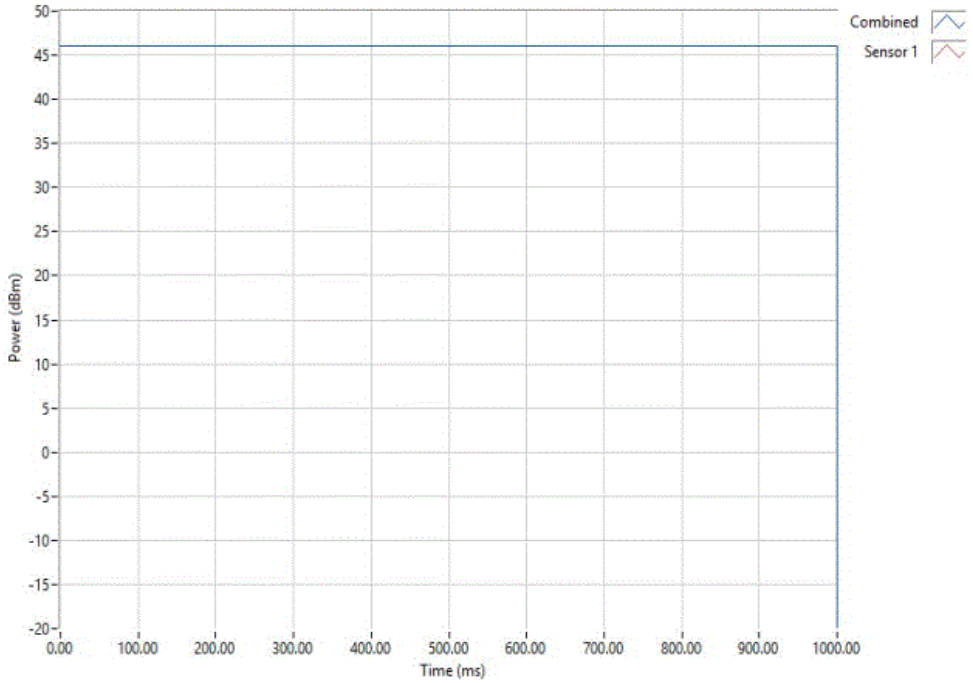
Antenna Port 1 MIMO, Low Channel LTE5, 1932.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.96	100	0	46	1640	Pass



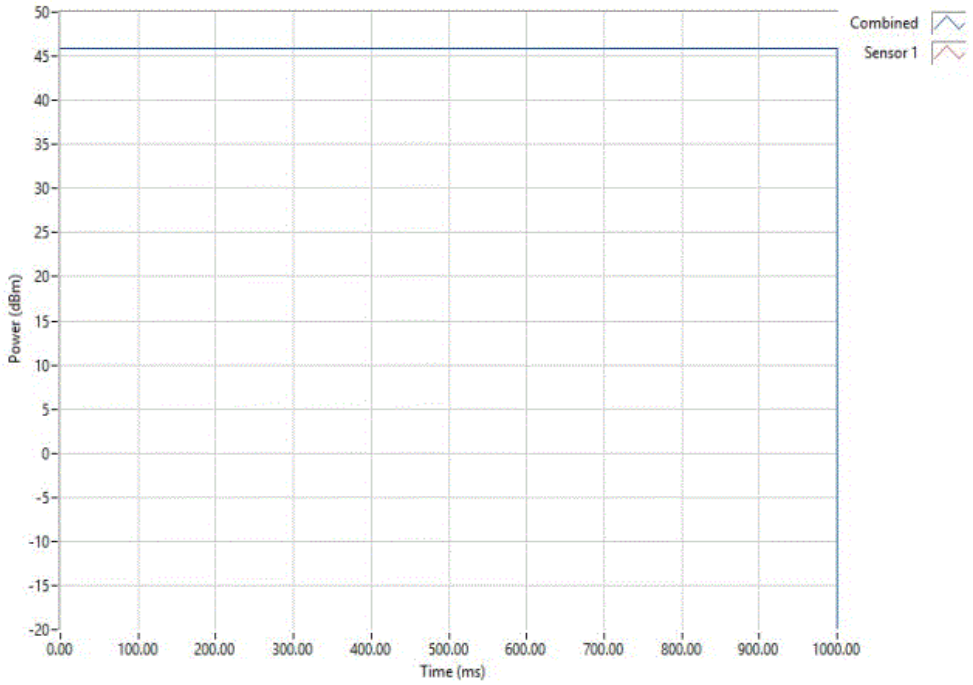
Antenna Port 1 MIMO, Mid Channel LTE5, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



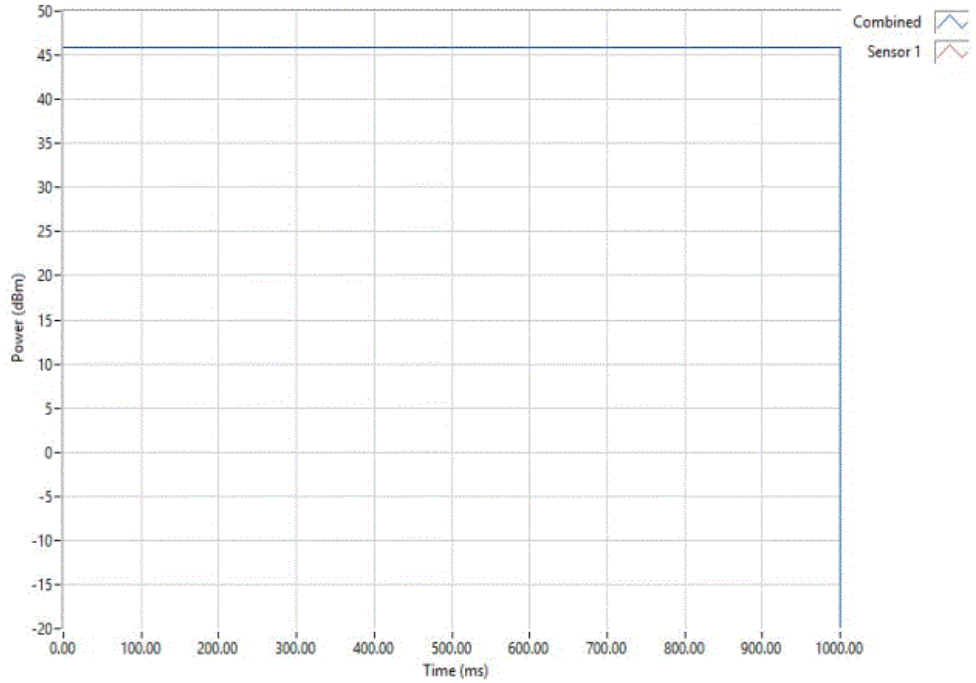
Antenna Port 1 MIMO, High Channel LTE5, 1987.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.99	100	0	46	1640	Pass



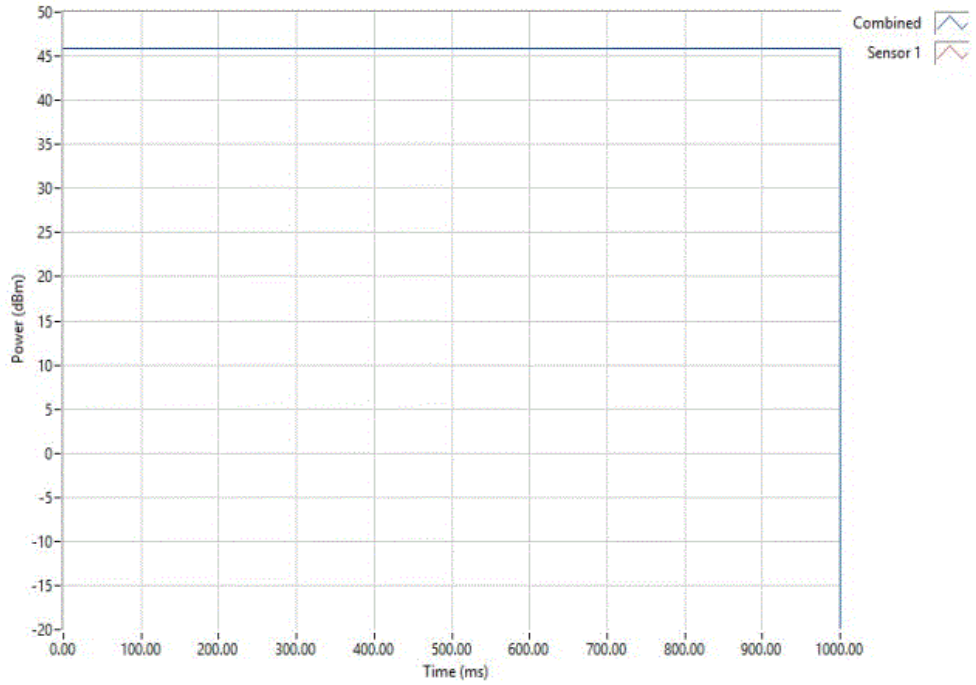
Antenna Port 1 MIMO, Low Channel LTE10, 1935 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.94	100	0	45.9	1640	Pass



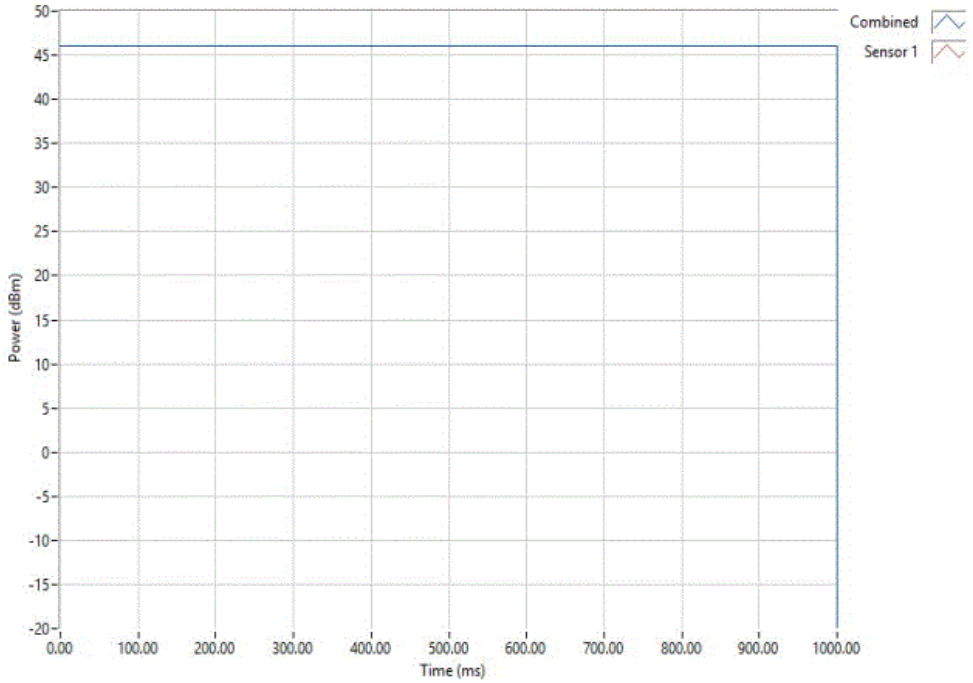
Antenna Port 1 MIMO, Mid Channel LTE10, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.95	100	0	46	1640	Pass



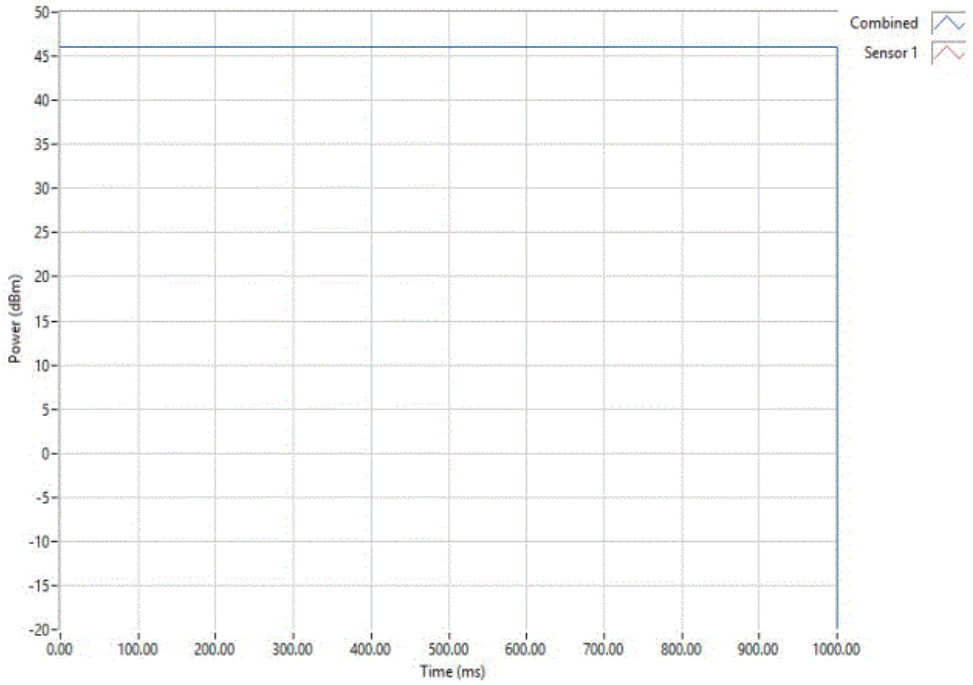
Antenna Port 1 MIMO, High Channel LTE10, 1985 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.95	100	0	46	1640	Pass



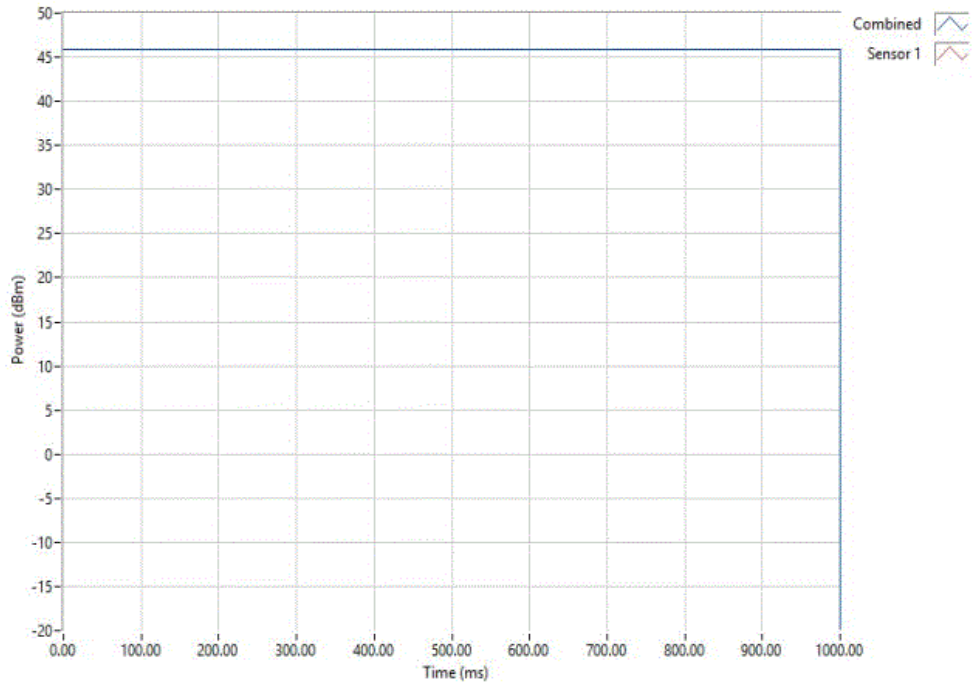
Antenna Port 1 MIMO, Low Channel LTE20, 1940 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.97	100	0	46	1640	Pass



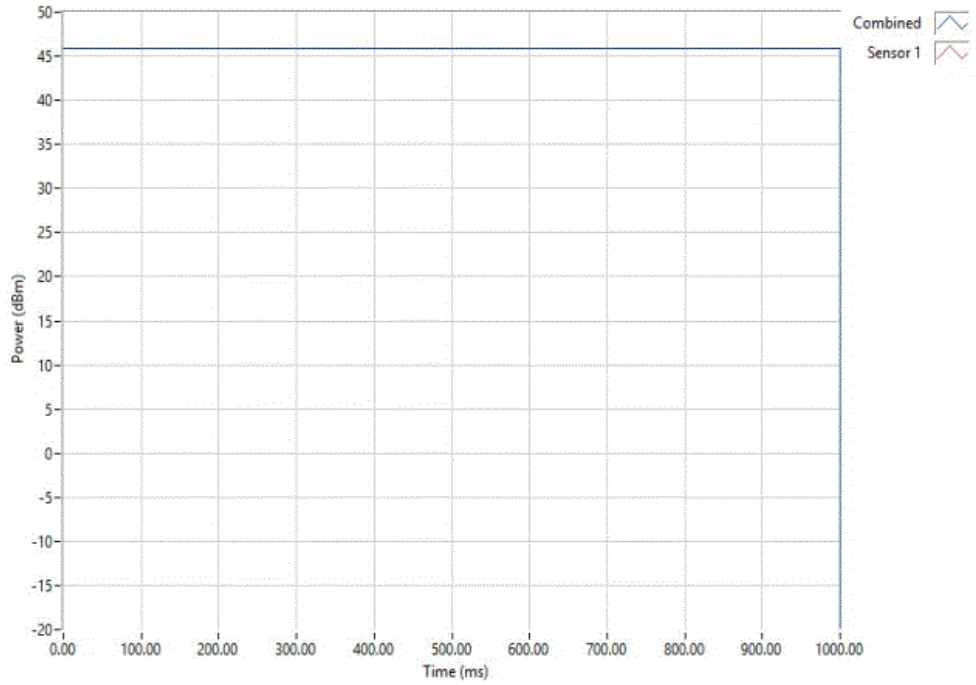
Antenna Port 1 MIMO, Mid Channel LTE20, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.99	100	0	46	1640	Pass



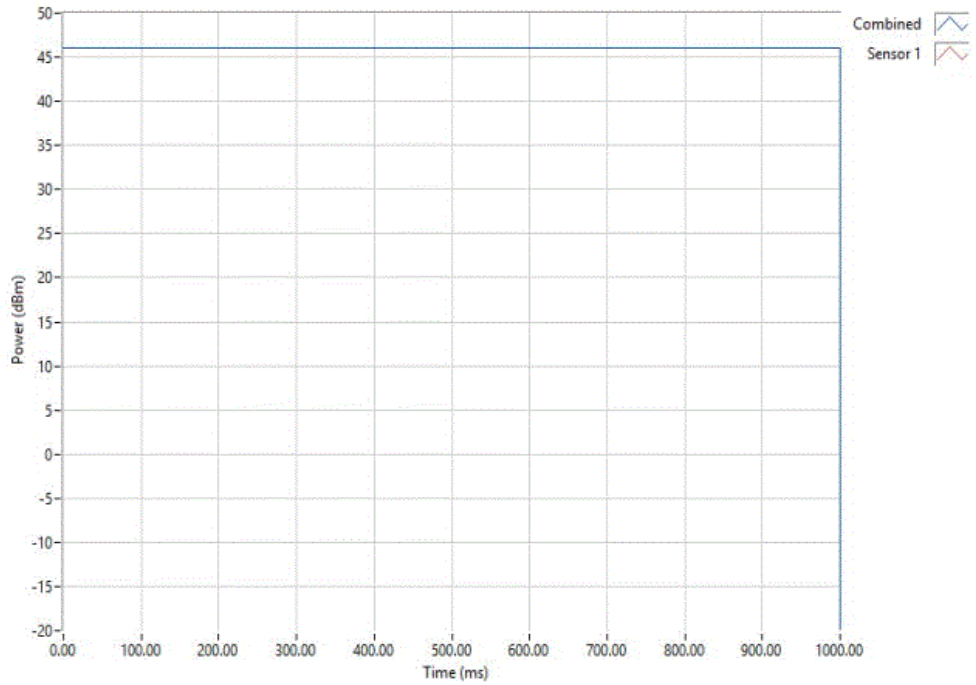
Antenna Port 1 MIMO, High Channel LTE20, 1980 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.95	100	0	46	1640	Pass



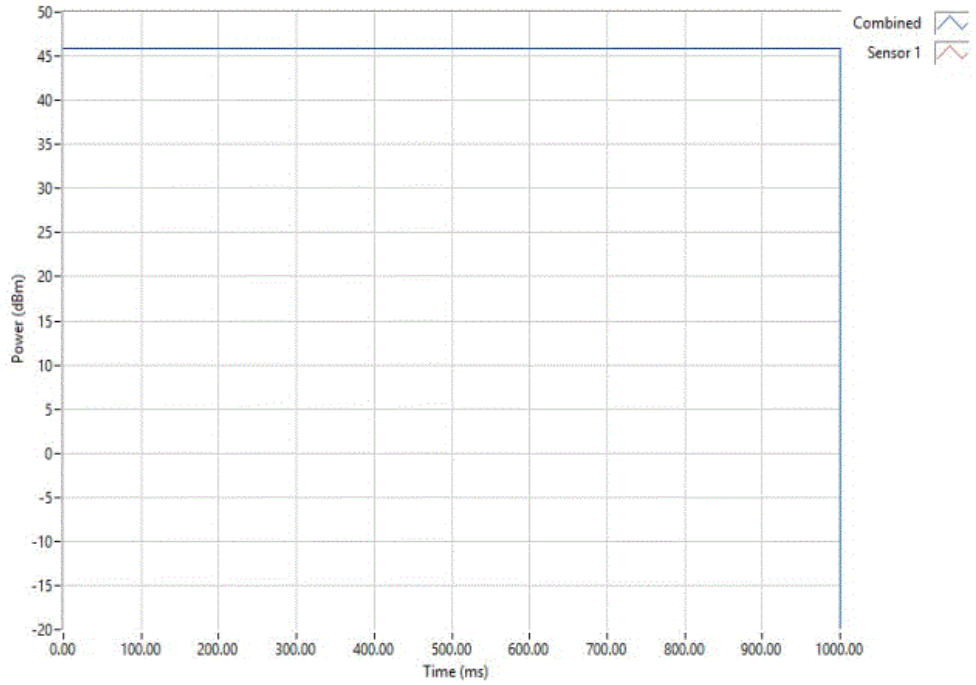
Antenna Port 2 MIMO, Low Channel LTE5, 1932.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.95	100	0	46	1640	Pass



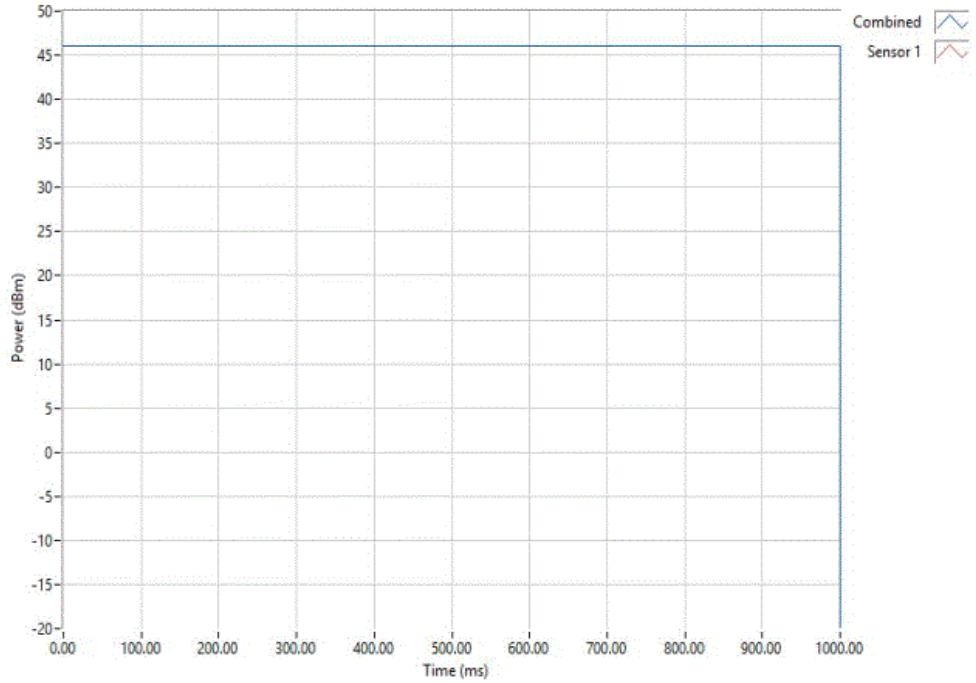
Antenna Port 2 MIMO, Mid Channel LTE5, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	46	100	0	46	1640	Pass



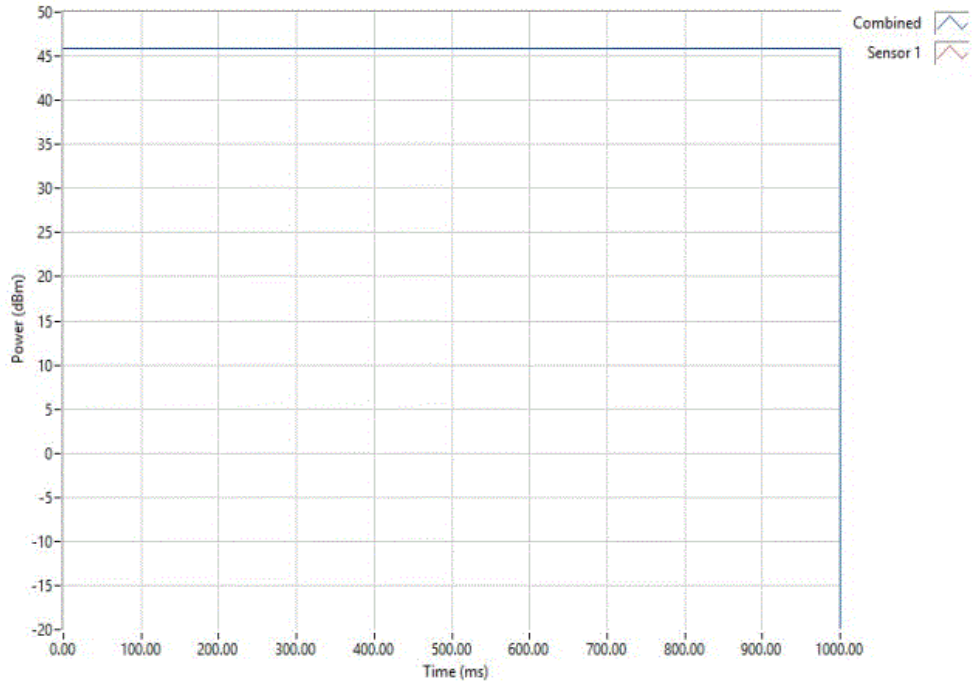
Antenna Port 2 MIMO, High Channel LTE5, 1987.5 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.95	100	0	46	1640	Pass



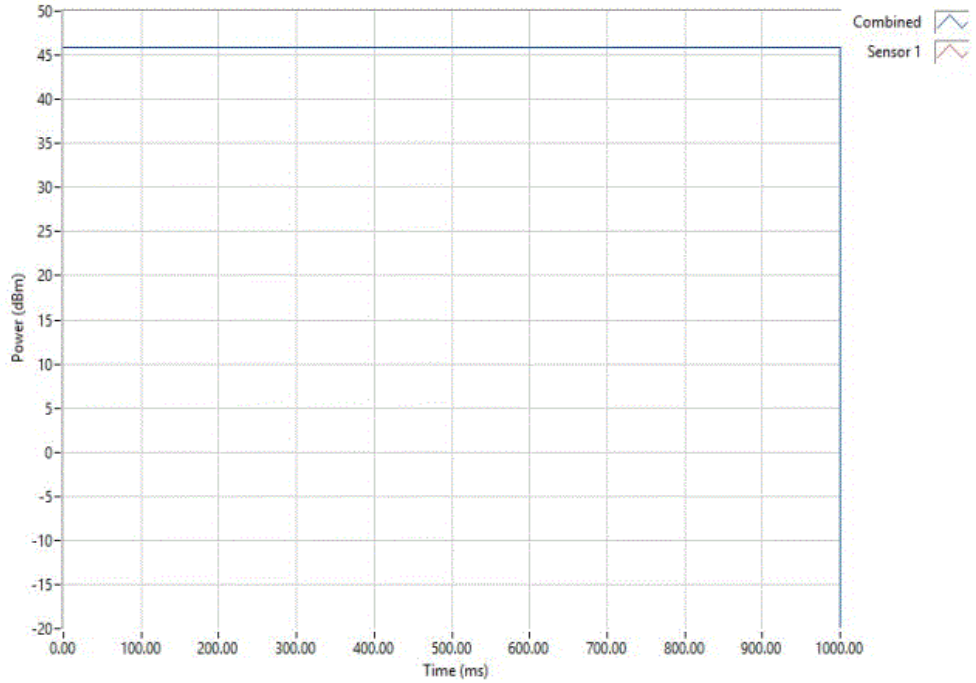
Antenna Port 2 MIMO, Low Channel LTE10, 1935 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.97	100	0	46	1640	Pass



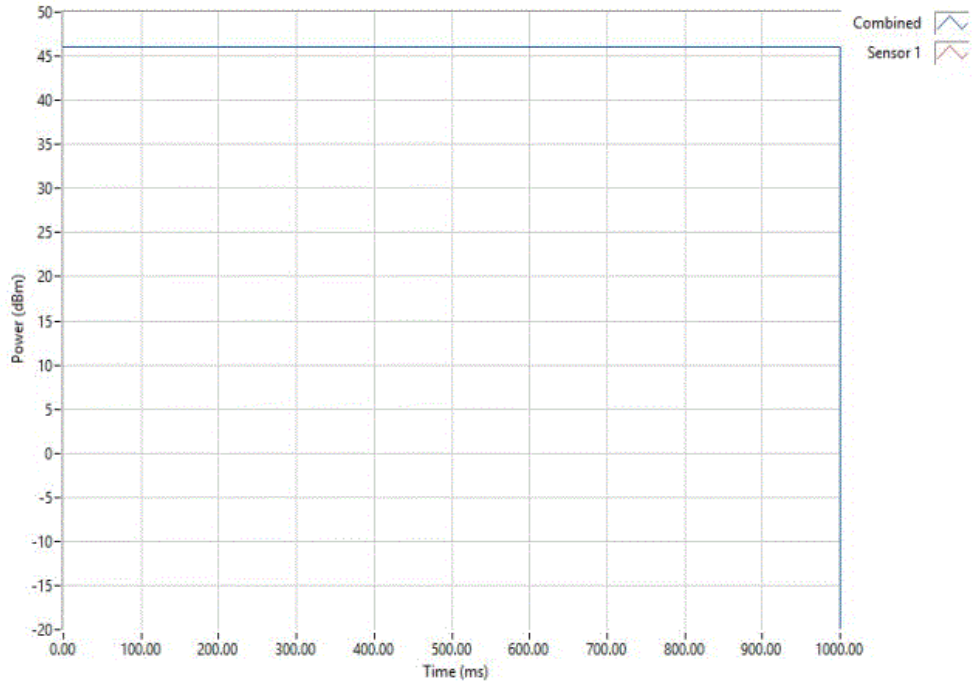
Antenna Port 2 MIMO, Mid Channel LTE10, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.96	100	0	46	1640	Pass



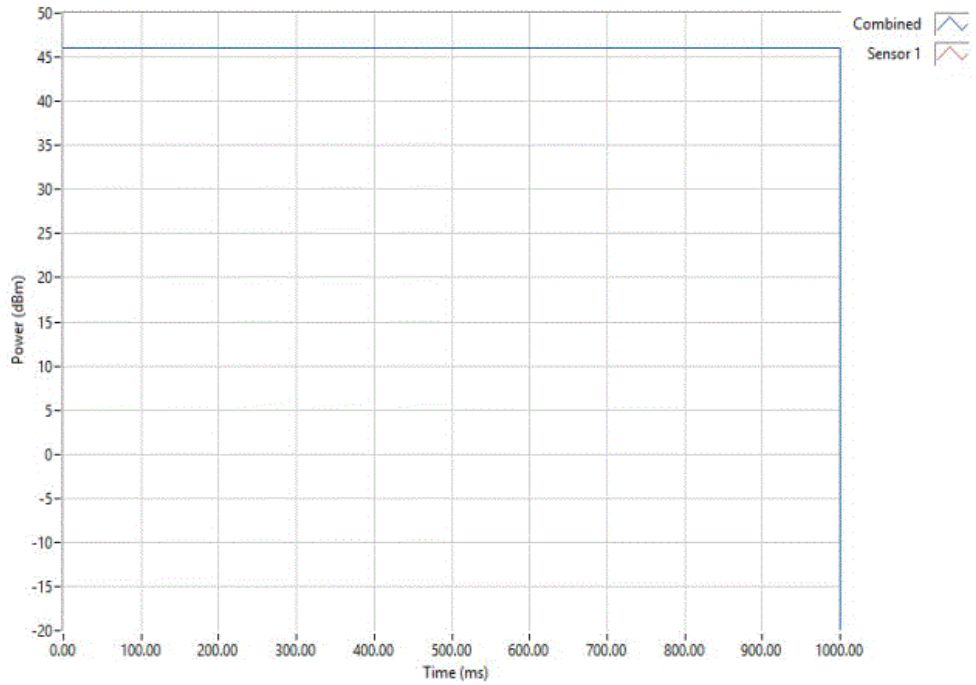
Antenna Port 2 MIMO, High Channel LTE10, 1985 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.94	100	0	45.9	1640	Pass



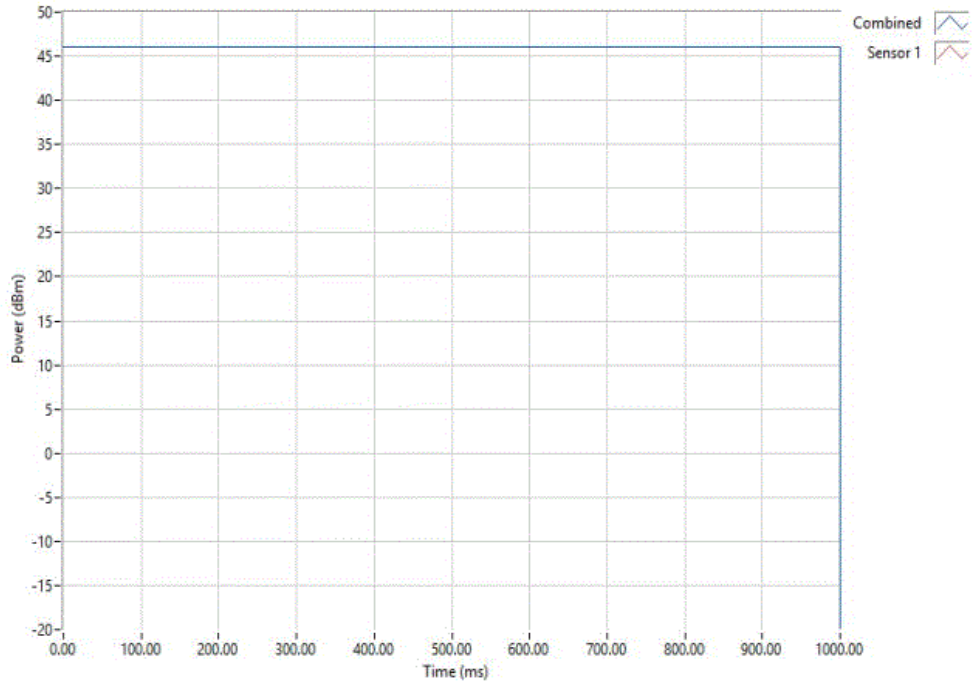
Antenna Port 2 MIMO, Low Channel LTE20, 1940 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.97	100	0	46	1640	Pass



Antenna Port 2 MIMO, Mid Channel LTE20, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



Antenna Port 2 MIMO, High Channel LTE20, 1980 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.99	100	0	46	1640	Pass



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - WCDMA

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Meter - Power	ETS Lindgren	7002-006	SRB	12/14/2015	12/14/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. This was used to verify the cable offset.

The RF output power was measured with the EUT set to the modes called out in the datasheet. The power measurement was made using a direct connection between the RF output of the EUT and an RF Power Sensor which only measures across the high time of the burst of the carrier.

The observed duty cycle was noted but not needed to calculate the EiRP.

EIRP = Max Measured Power + Antenna gain (dBi)

The measurements from Port 1 and Port 2 were summed to determine the total average power in EIRP.

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - WCDMA

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0076
Serial Number:	K163000003			**Date:**	09/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	21.6 °C
Attendees:	Edward Lee			**Humidity:**	49.8% RH
Project:	None			**Barometric Pres.:**	1016 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

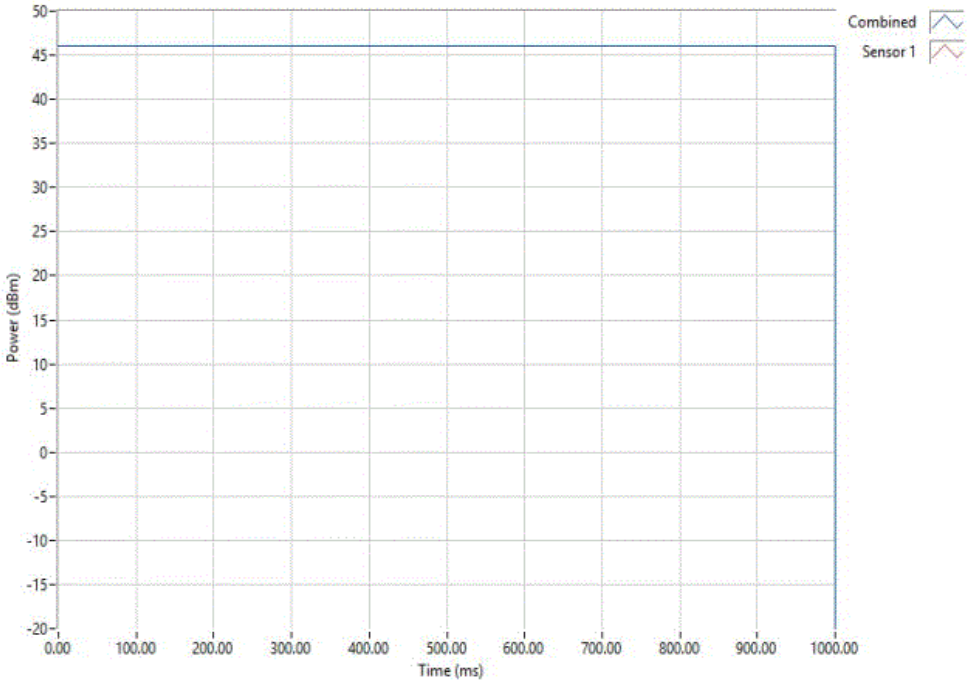
Configuration #	1	Signature

		Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
Antenna Port 1							
	Low Channel WCDMA, 1932.4 MHz	45.98	100	0	46	1640	Pass
	Mid Channel WCDMA, 1960 MHz	45.99	100	0	46	1640	Pass
	High Channel WCDMA, 1987.6 MHz	45.97	100	0	46	1640	Pass
Antenna Port 2							
	Low Channel WCDMA, 1932.4 MHz	45.98	100	0	46	1640	Pass
	Mid Channel WCDMA, 1960 MHz	45.98	100	0	46	1640	Pass
	High Channel WCDMA, 1987.6 MHz	45.96	100	0	46	1640	Pass
Antenna Port 1 MIMO							
	Low Channel WCDMA, 1932.4 MHz	45.97	100	0	46	1640	Pass
	Mid Channel WCDMA, 1960 MHz	45.96	100	0	46	1640	Pass
	High Channel WCDMA, 1987.6 MHz	45.98	100	0	46	1640	Pass
Antenna Port 2 MIMO							
	Low Channel WCDMA, 1932.4 MHz	45.98	100	0	46	1640	Pass
	Mid Channel WCDMA, 1960 MHz	46	100	0	46	1640	Pass
	High Channel WCDMA, 1987.6 MHz	46	100	0	46	1640	Pass

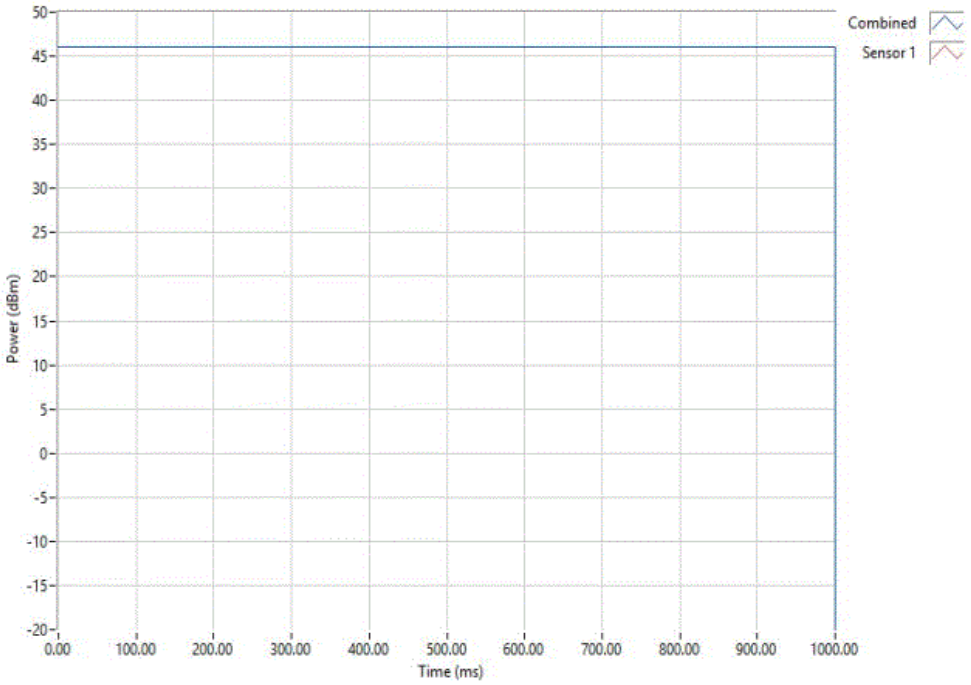
Linear Sum of the Power	Port 1 (mW)	Port 2 (mW)	Sum (mW)	Sum (dBm)				
Low Channel WCDMA, 1932.4 MHz	39536.7	39627.8	79164.5	48.99	0	48.99	1640	Pass
Mid Channel WCDMA, 1960 MHz	39445.7	39810.7	79256.4	48.99	0	48.99	1640	Pass
High Channel WCDMA, 1987.6 MHz	39627.8	39810.7	79438.5	49.00	0	49.00	1640	Pass

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - WCDMA

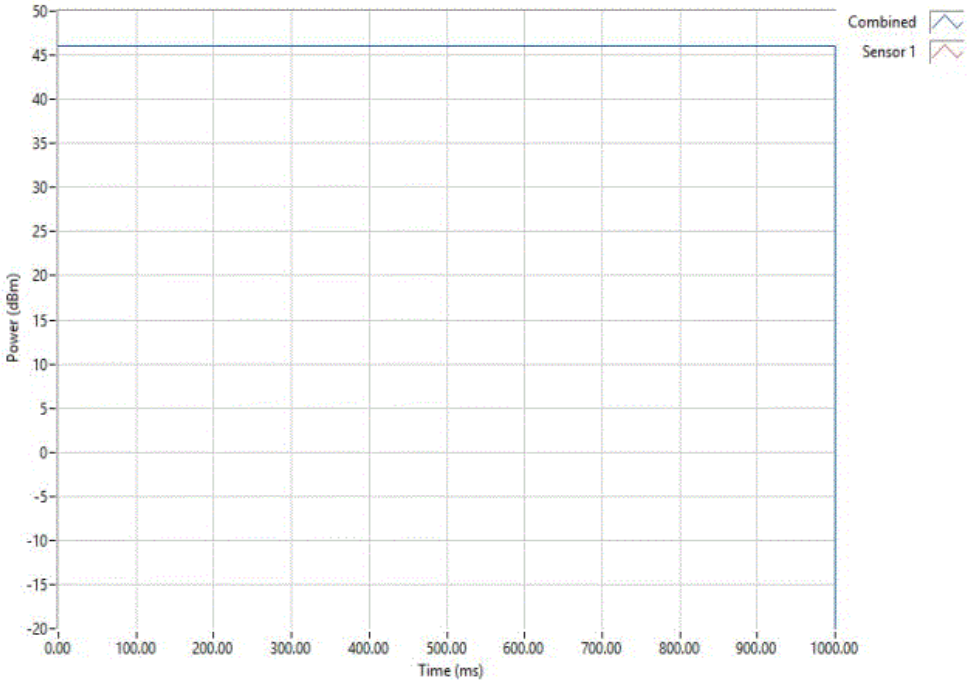
Antenna Port 1, Low Channel WCDMA, 1932.4 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



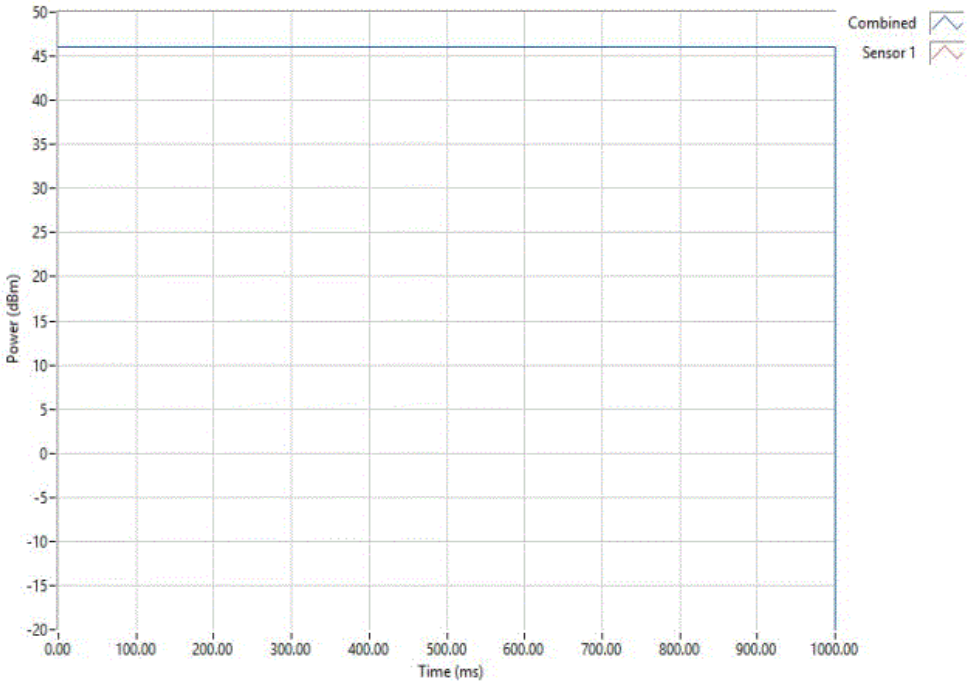
Antenna Port 1, Mid Channel WCDMA, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.99	100	0	46	1640	Pass



Antenna Port 1, High Channel WCDMA, 1987.6 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.97	100	0	46	1640	Pass

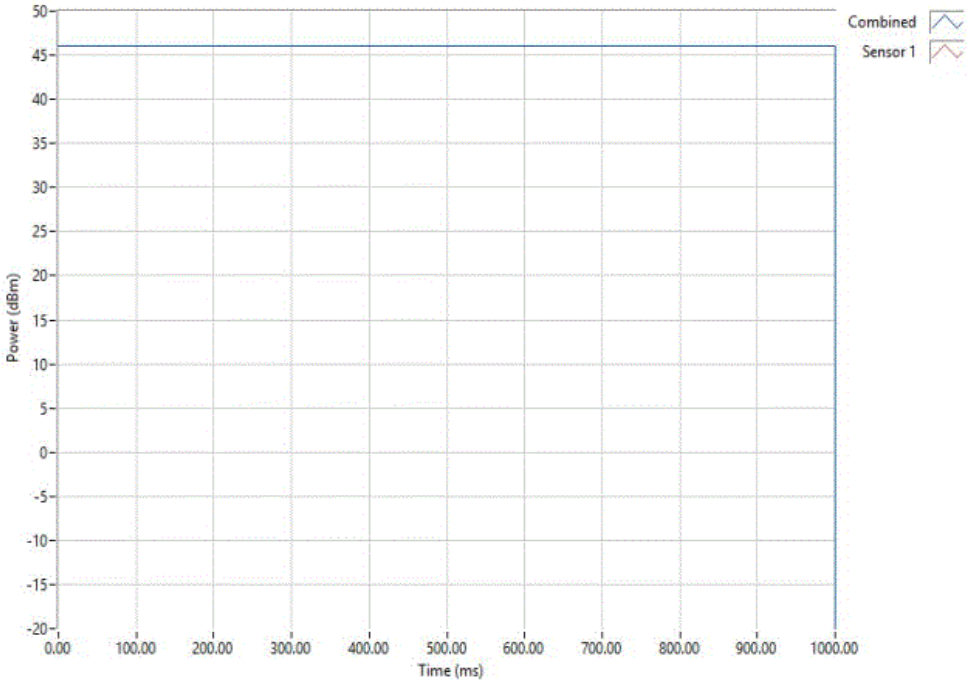


Antenna Port 2, Low Channel WCDMA, 1932.4 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass

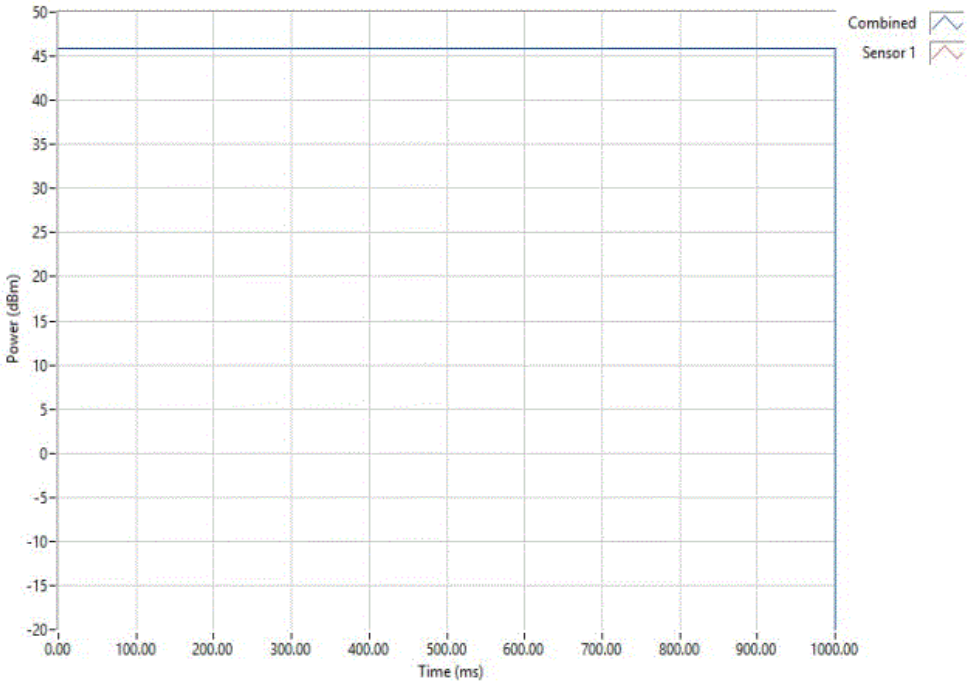


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - WCDMA

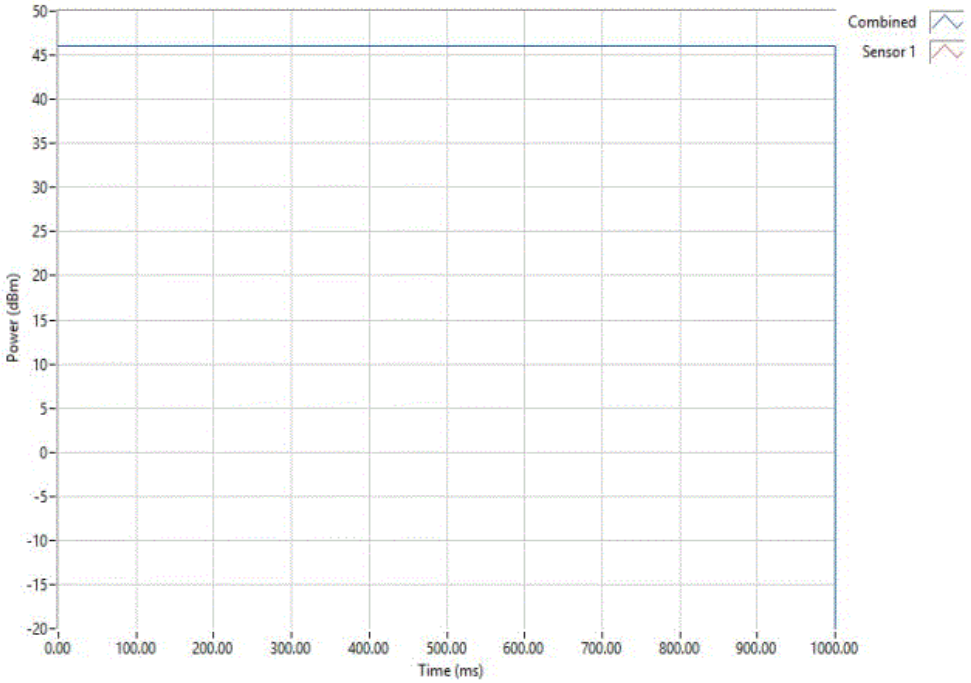
Antenna Port 2, Mid Channel WCDMA, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



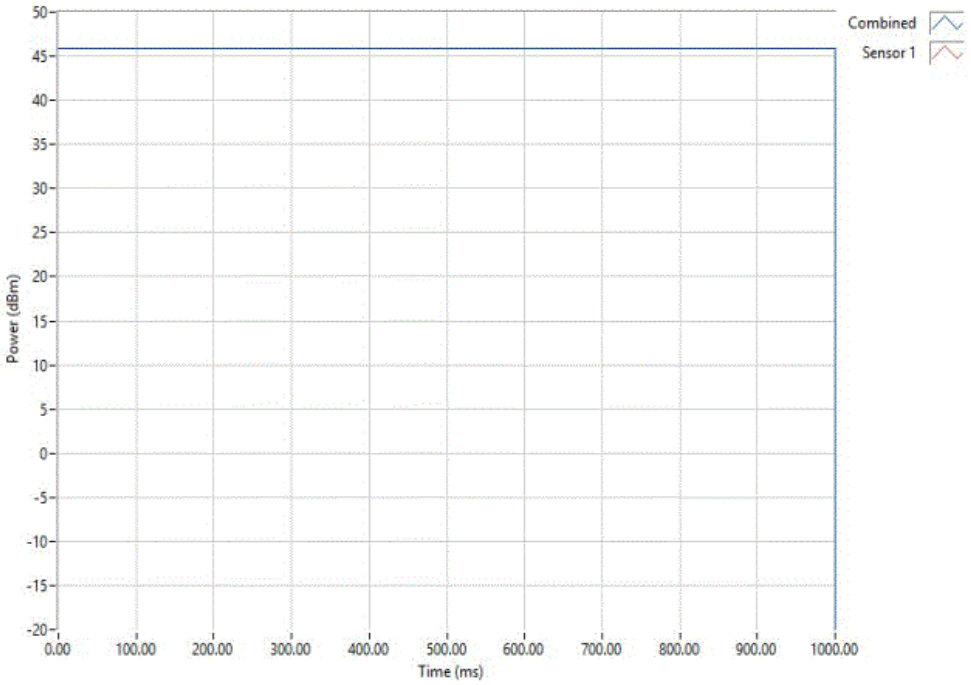
Antenna Port 2, High Channel WCDMA, 1987.6 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.96	100	0	46	1640	Pass



Antenna Port 1 MIMO, Low Channel WCDMA, 1932.4 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.97	100	0	46	1640	Pass



Antenna Port 1 MIMO, Mid Channel WCDMA, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.96	100	0	46	1640	Pass

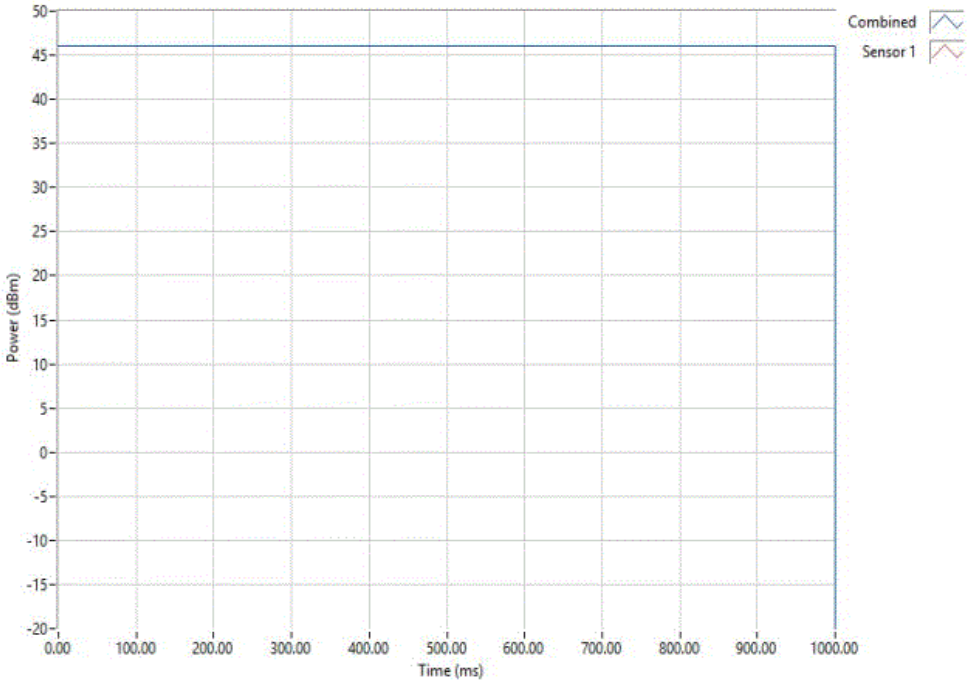


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - WCDMA

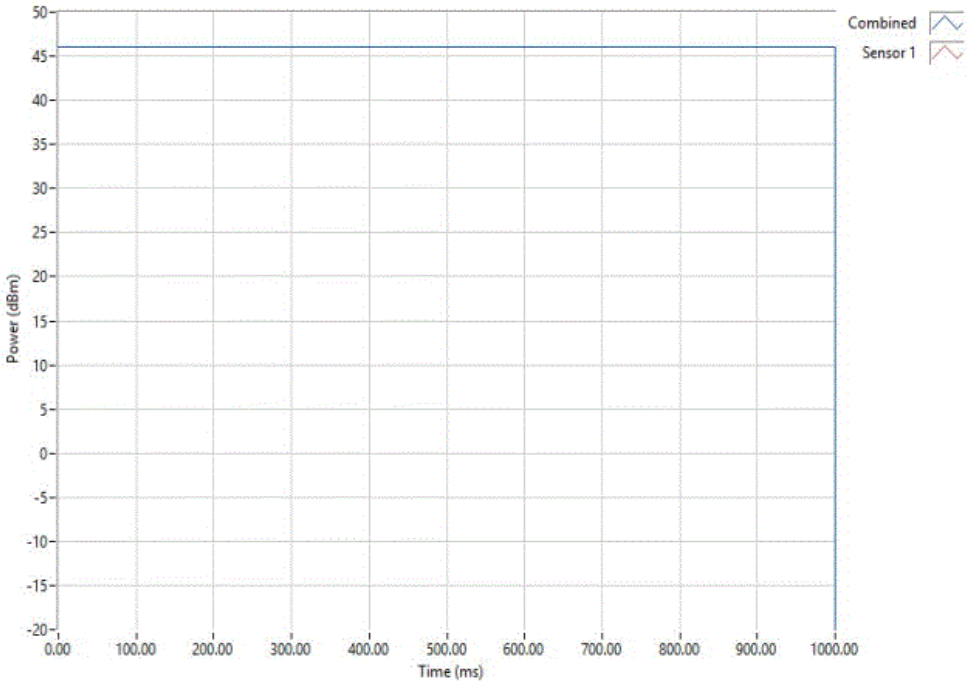
NORTHWEST EMC

XMit 2016.05.06

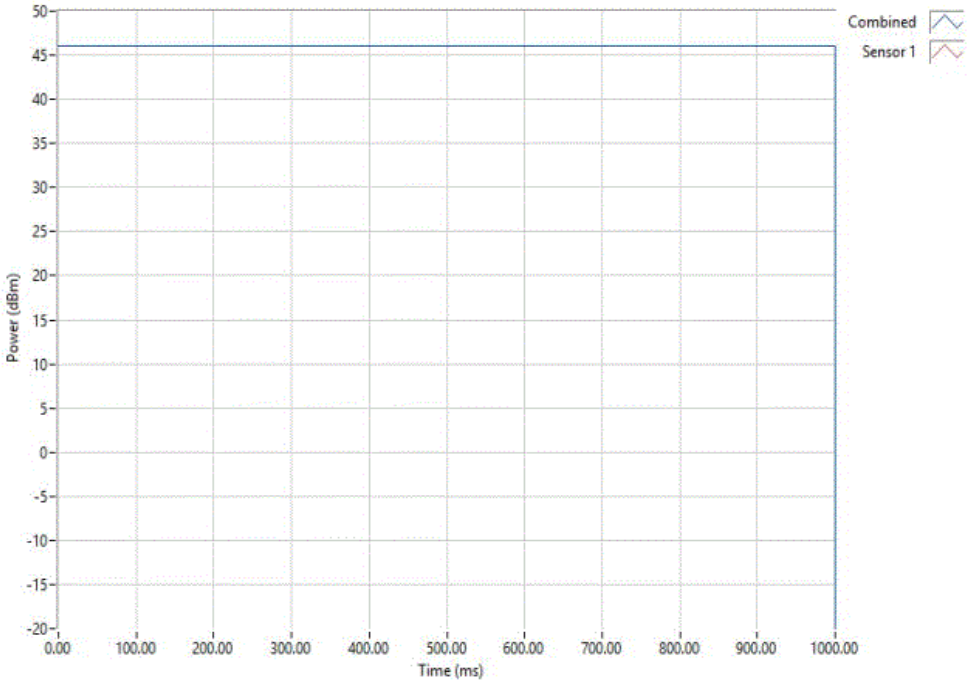
Antenna Port 1 MIMO, High Channel WCDMA, 1987.6 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



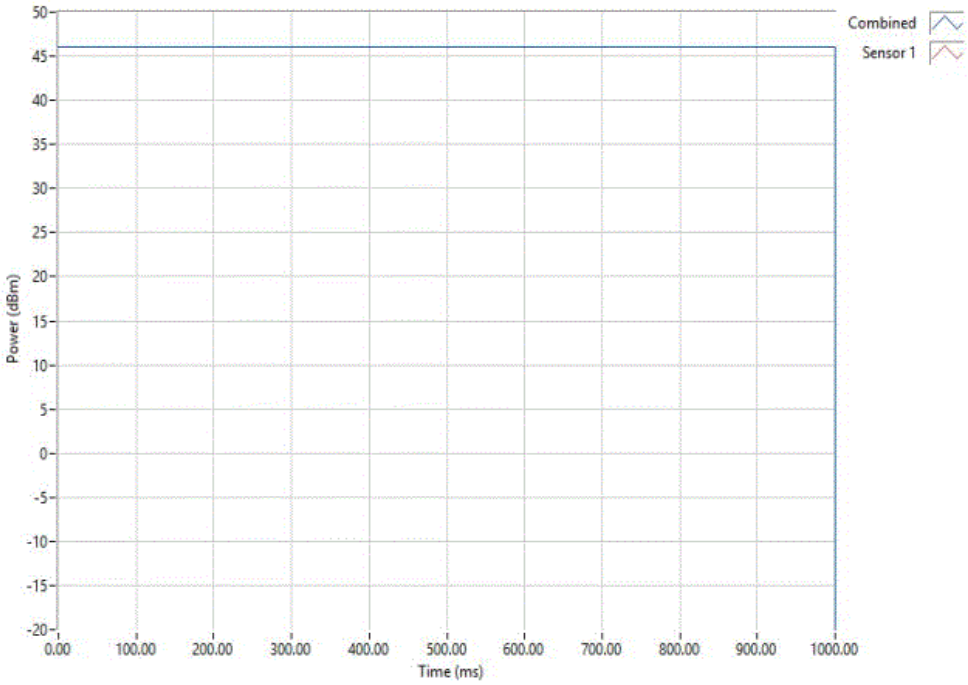
Antenna Port 2 MIMO, Low Channel WCDMA, 1932.4 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	45.98	100	0	46	1640	Pass



Antenna Port 2 MIMO, Mid Channel WCDMA, 1960 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	46	100	0	46	1640	Pass



Antenna Port 2 MIMO, High Channel WCDMA, 1987.6 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle (%)	Antenna Gain (dBi)	EIRP (dBm)	Limit (Watts)	Results
	46	100	0	46	1640	Pass



PEAK TO AVERAGE RATIO - LTE BAND 2

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

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

Because the conducted Output Power was measured using a RMS Average detector, the Peak to Average Ratio was measured to show that the maximum peak-max-hold spectrum to the maximum of the average spectrum does not exceed 13 dB.

The spectrum analyzer settings were as follows:
Span set to encompass the entire emission bandwidth, centered on the transmit channel.

The largest difference between the following two traces was calculated:
- 1st Trace: Peak detector and trace max-hold.
- 2nd Trace: The same procedure and settings as was used for conducted Output Power.

PEAK TO AVERAGE RATIO - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0073
Serial Number:	K163000003			**Date:**	08/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	22.4 °C
Attendees:	Andy Ku			**Humidity:**	50% RH
Project:	None			**Barometric Pres.:**	1015 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

Configuration #	1	Signature

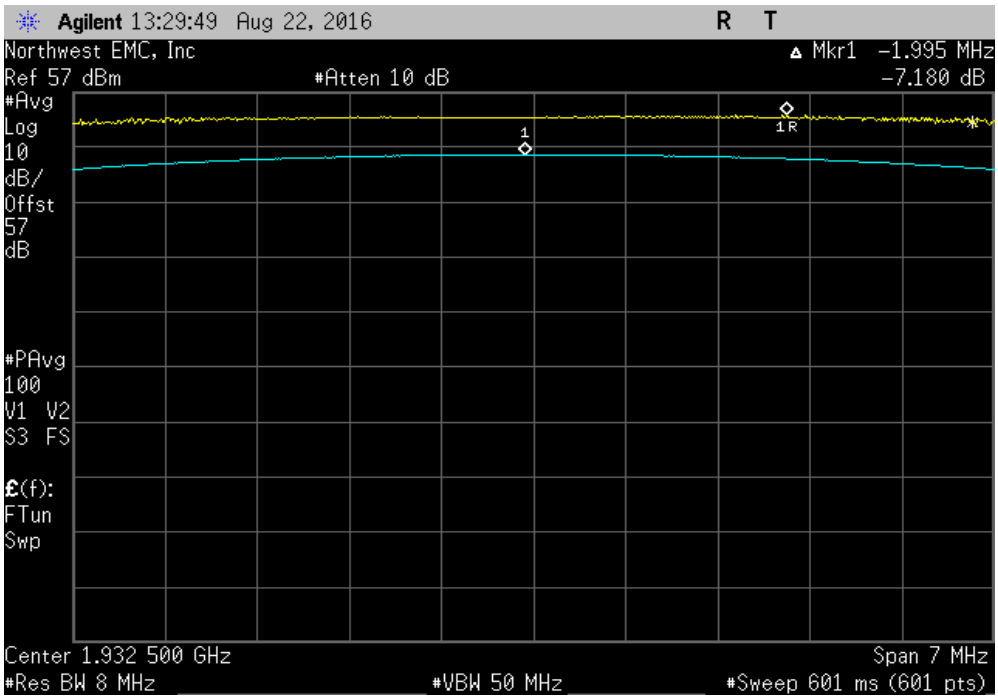
		Value (dB)	Limit < (dB)	Results
Antenna Port 1				
	Low Channel LTE5, 1932.5 MHz	7.18	13	Pass
	Mid Channel LTE5, 1960 MHz	7.05	13	Pass
	High Channel LTE5, 1987.5 MHz	7.13	13	Pass
	Low Channel LTE10, 1935 MHz	10.08	13	Pass
	Mid Channel LTE10, 1960 MHz	9.75	13	Pass
	High Channel LTE10, 1985 MHz	9.80	13	Pass
	Low Channel LTE20, 1940 MHz	11.87	13	Pass
	Mid Channel LTE20, 1960 MHz	11.79	13	Pass
	High Channel LTE20, 1980 MHz	11.24	13	Pass
Antenna Port 2				
	Low Channel LTE5, 1932.5 MHz	7.19	13	Pass
	Mid Channel LTE5, 1960 MHz	7.03	13	Pass
	High Channel LTE5, 1987.5 MHz	7.10	13	Pass
	Low Channel LTE10, 1935 MHz	9.82	13	Pass
	Mid Channel LTE10, 1960 MHz	9.35	13	Pass
	High Channel LTE10, 1985 MHz	9.77	13	Pass
	Low Channel LTE20, 1940 MHz	12.79	13	Pass
	Mid Channel LTE20, 1960 MHz	11.78	13	Pass
	High Channel LTE20, 1980 MHz	11.44	13	Pass

PEAK TO AVERAGE RATIO - LTE BAND 2

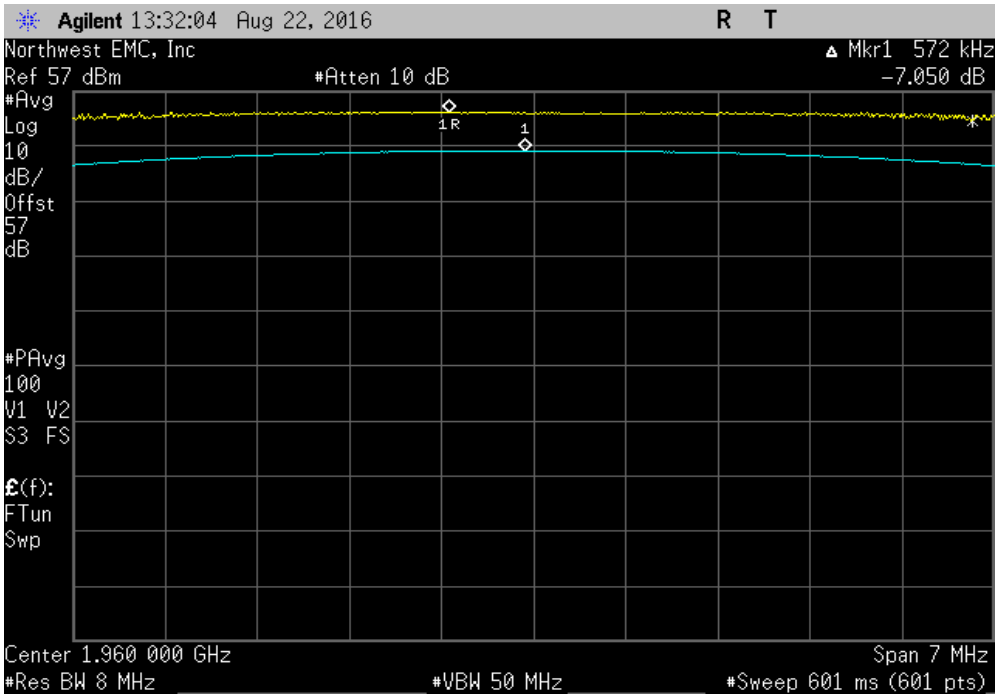
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, Low Channel LTE5, 1932.5 MHz						
				Value (dB)	Limit < (dB)	Results
				7.18	13	Pass



Antenna Port 1, Mid Channel LTE5, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				7.05	13	Pass

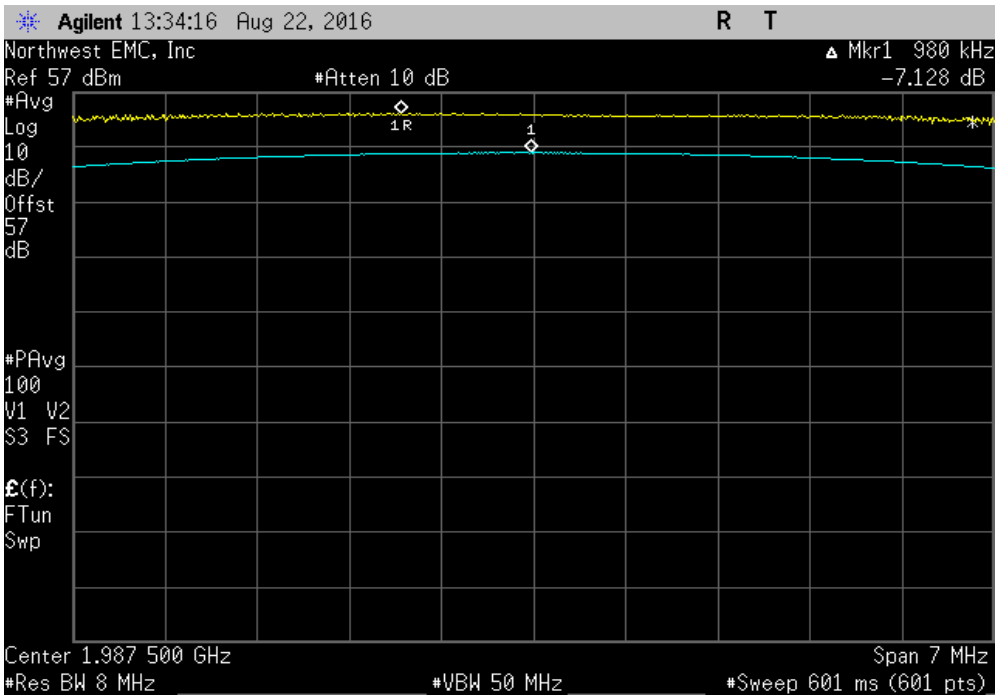


PEAK TO AVERAGE RATIO - LTE BAND 2

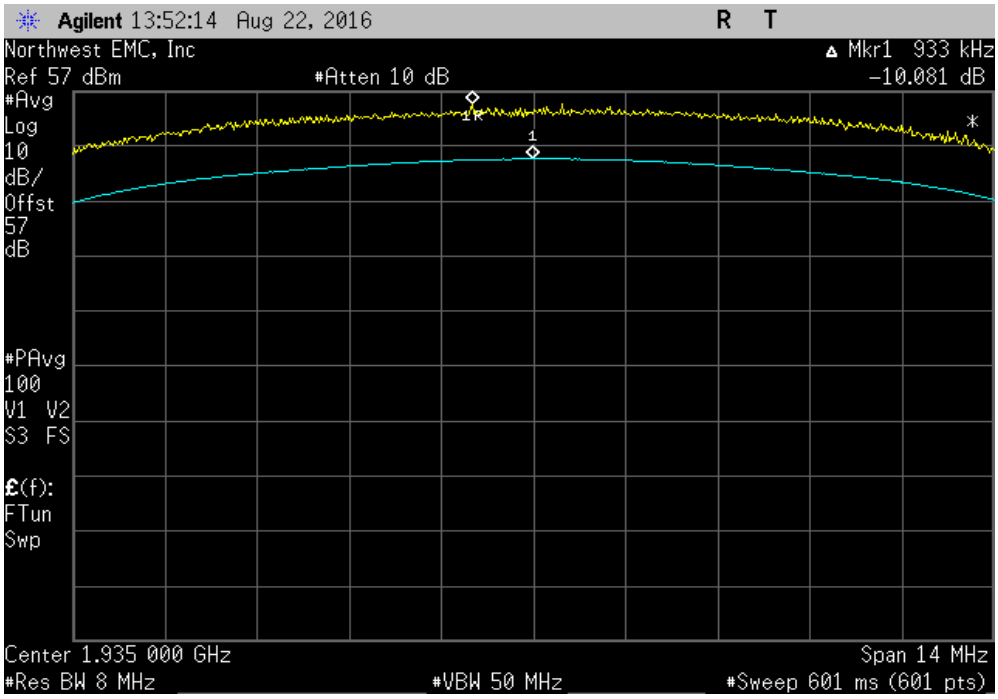
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, High Channel LTE5, 1987.5 MHz						
				Value (dB)	Limit < (dB)	Results
				7.13	13	Pass



Antenna Port 1, Low Channel LTE10, 1935 MHz						
				Value (dB)	Limit < (dB)	Results
				10.081	13	Pass

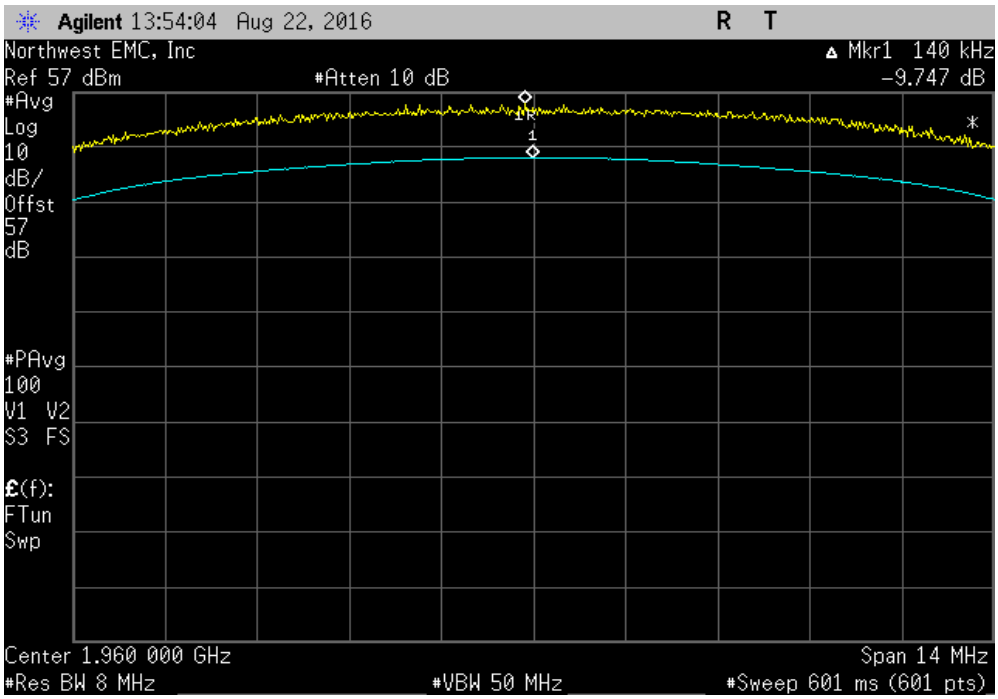


PEAK TO AVERAGE RATIO - LTE BAND 2

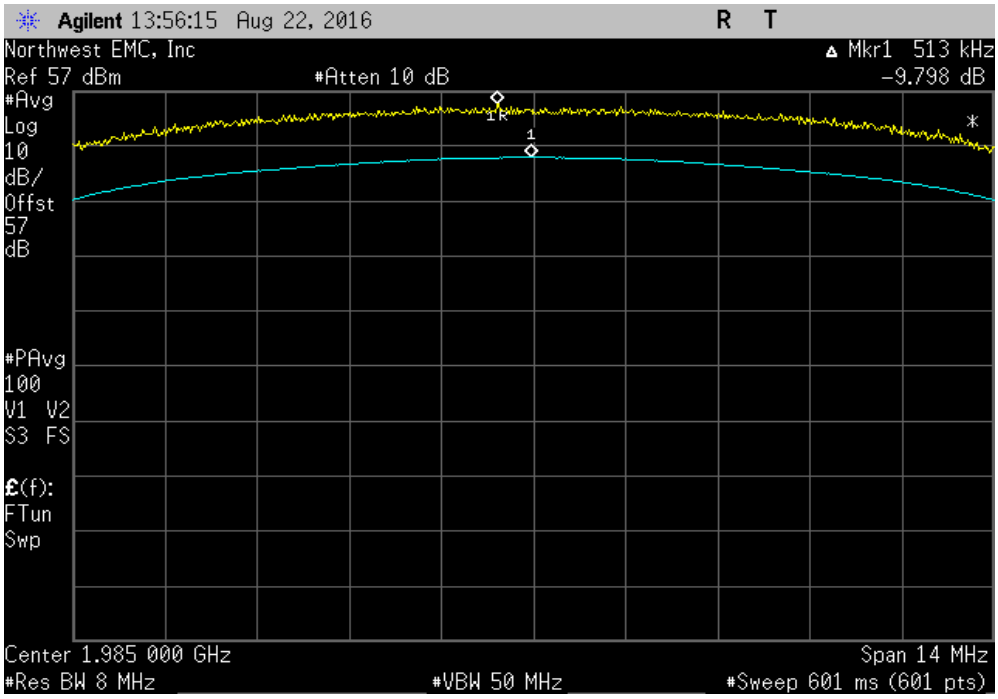
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, Mid Channel LTE10, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				9.75	13	Pass



Antenna Port 1, High Channel LTE10, 1985 MHz						
				Value (dB)	Limit < (dB)	Results
				9.798	13	Pass

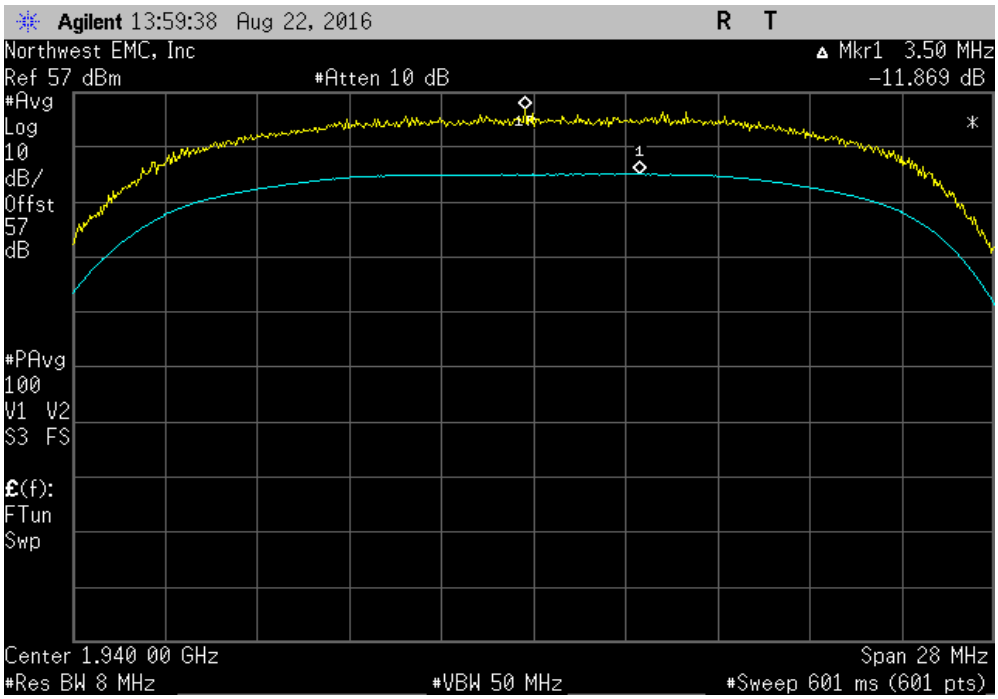


PEAK TO AVERAGE RATIO - LTE BAND 2

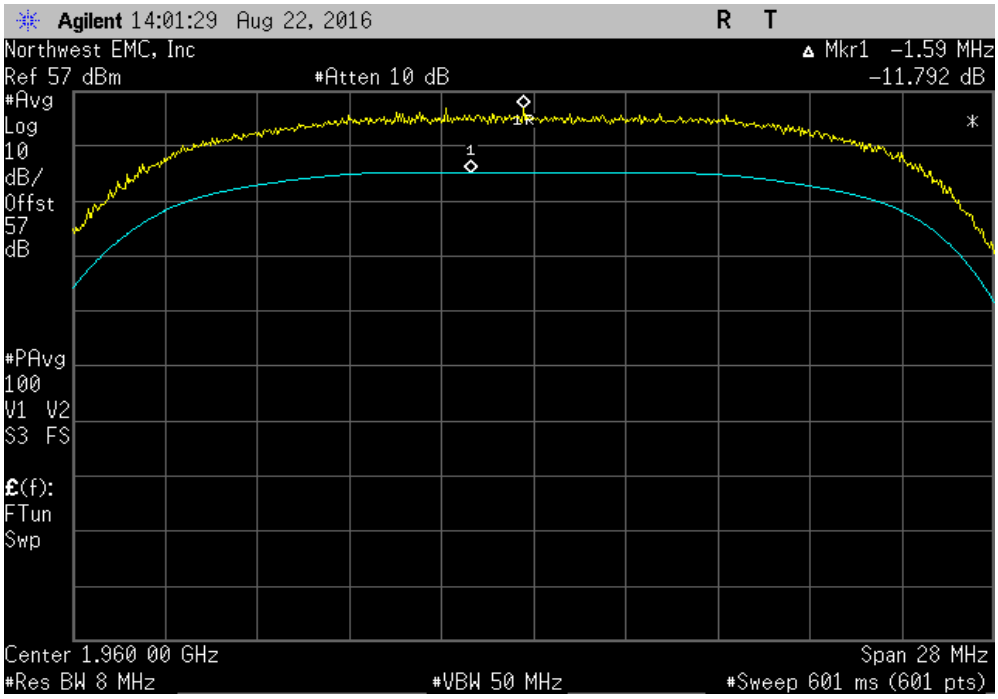
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, Low Channel LTE20, 1940 MHz						
				Value (dB)	Limit < (dB)	Results
				11.87	13	Pass



Antenna Port 1, Mid Channel LTE20, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				11.792	13	Pass

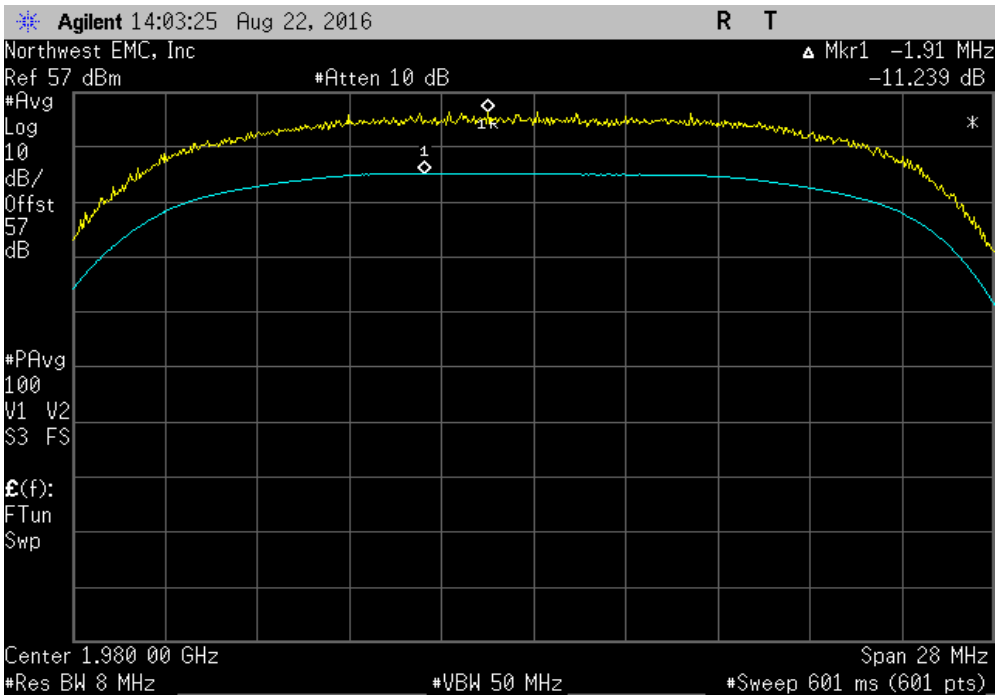


PEAK TO AVERAGE RATIO - LTE BAND 2

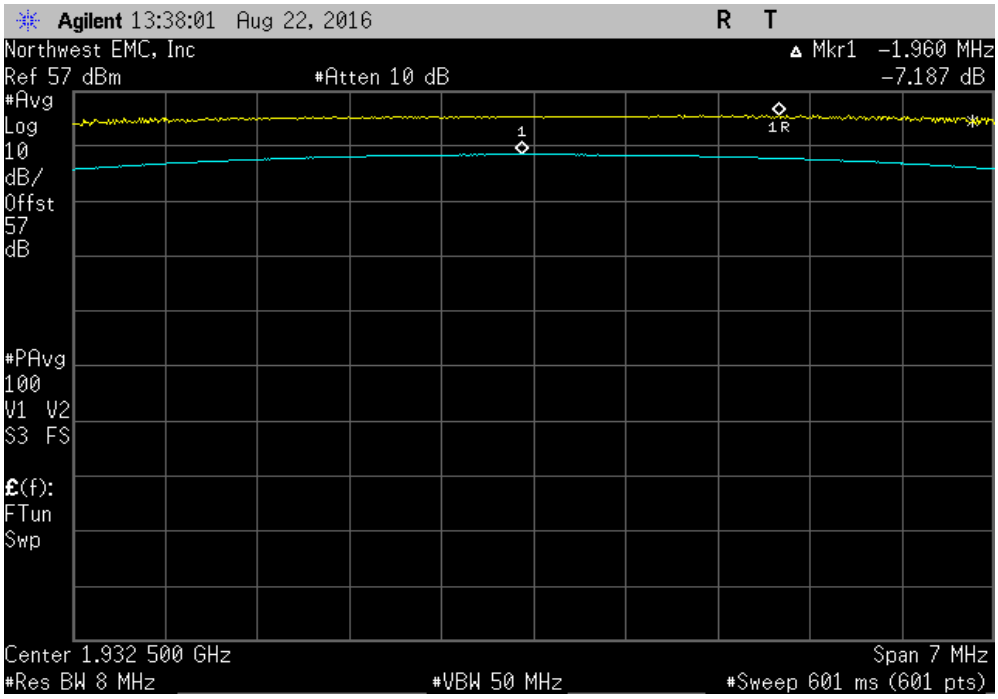
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, High Channel LTE20, 1980 MHz						
				Value (dB)	Limit < (dB)	Results
				11.24	13	Pass



Antenna Port 2, Low Channel LTE5, 1932.5 MHz						
				Value (dB)	Limit < (dB)	Results
				7.187	13	Pass

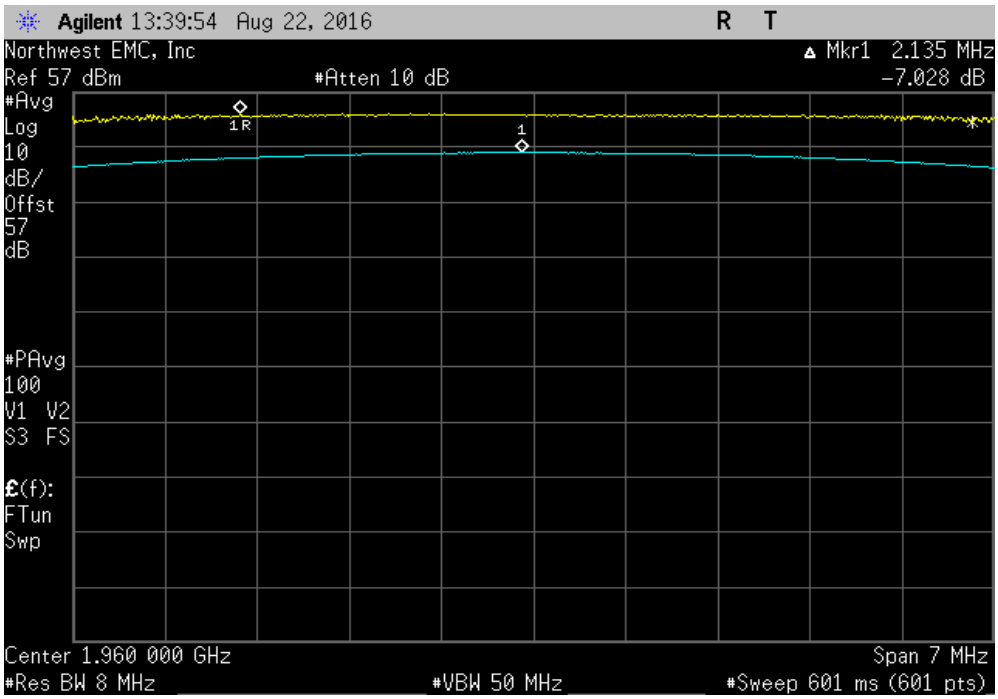


PEAK TO AVERAGE RATIO - LTE BAND 2

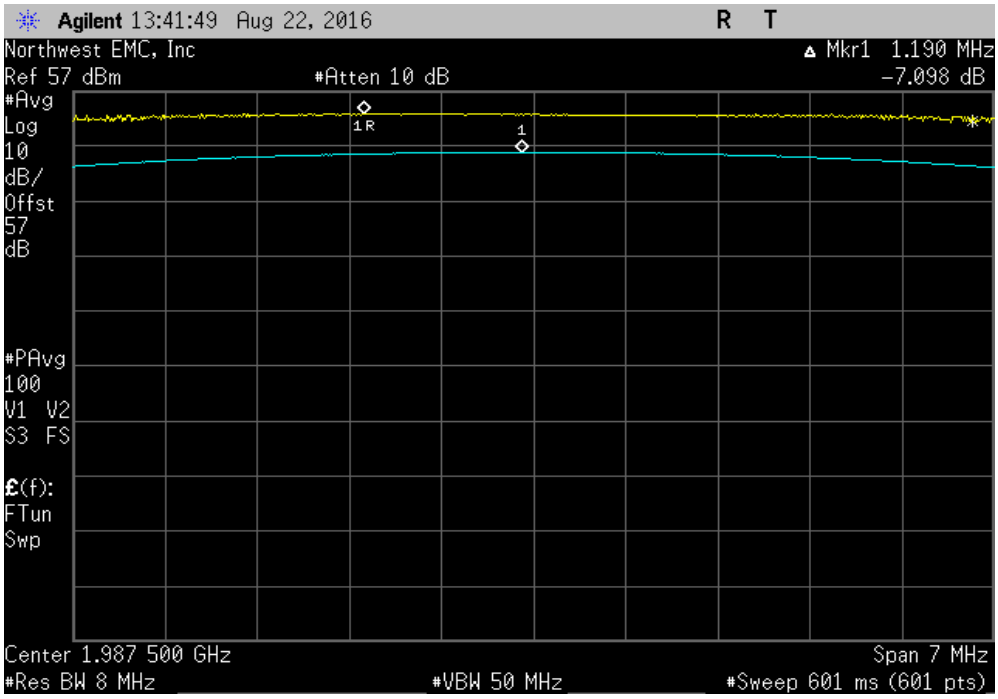
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, Mid Channel LTE5, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				7.03	13	Pass



Antenna Port 2, High Channel LTE5, 1987.5 MHz						
				Value (dB)	Limit < (dB)	Results
				7.098	13	Pass

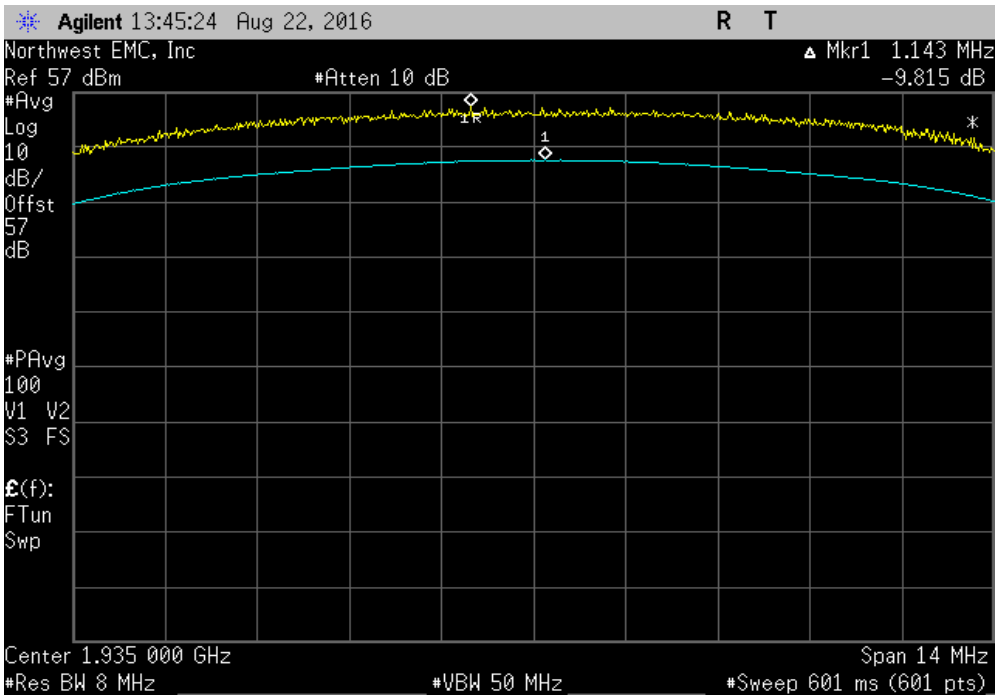


PEAK TO AVERAGE RATIO - LTE BAND 2

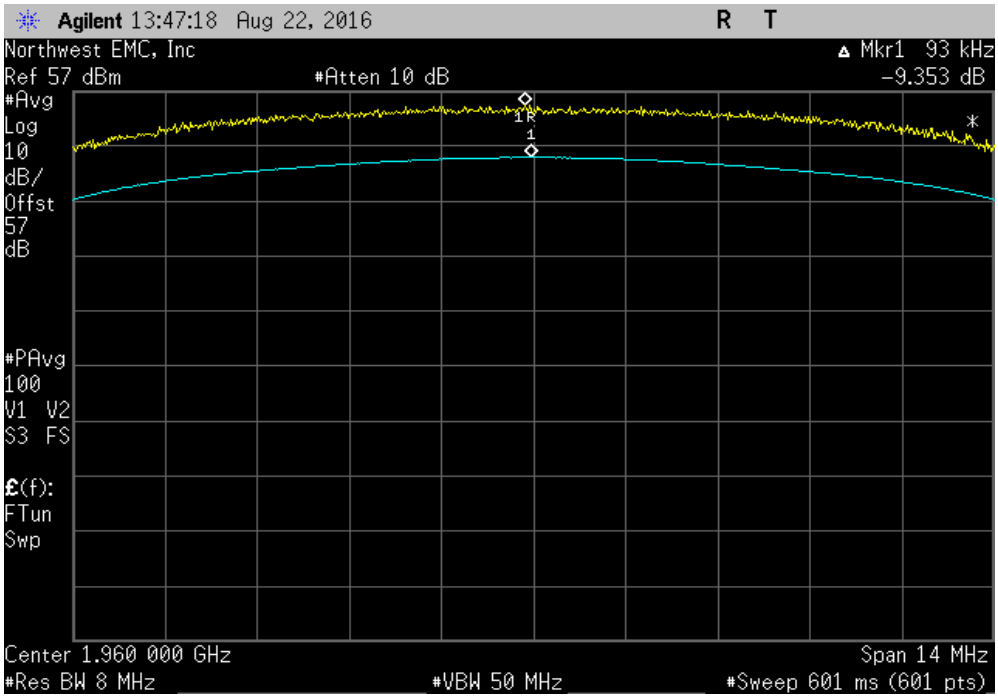
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, Low Channel LTE10, 1935 MHz						
				Value (dB)	Limit < (dB)	Results
				9.82	13	Pass



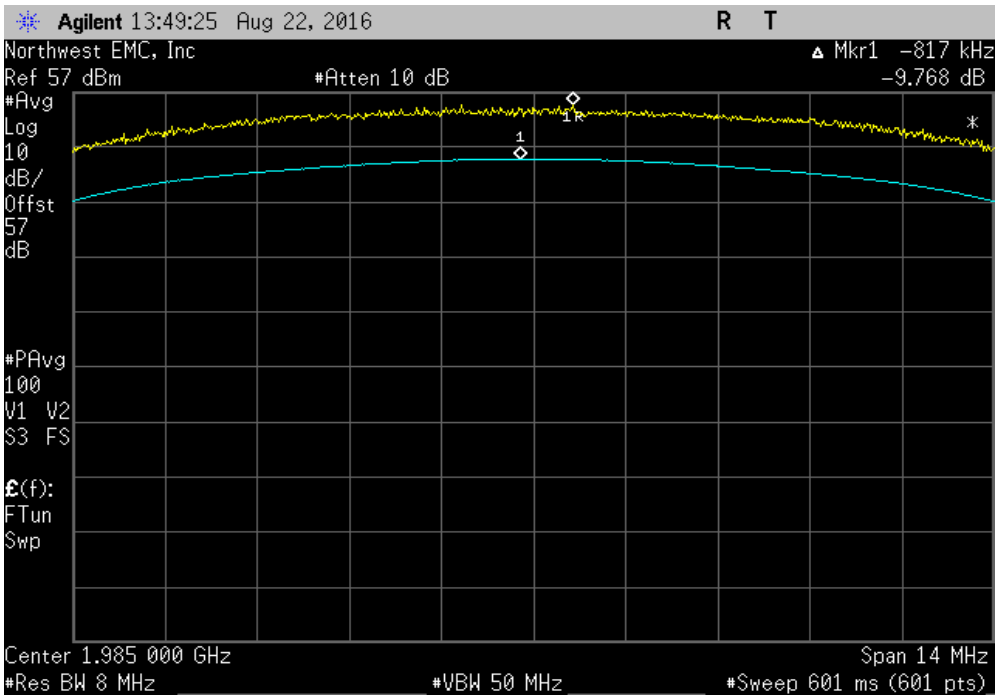
Antenna Port 2, Mid Channel LTE10, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				9.353	13	Pass



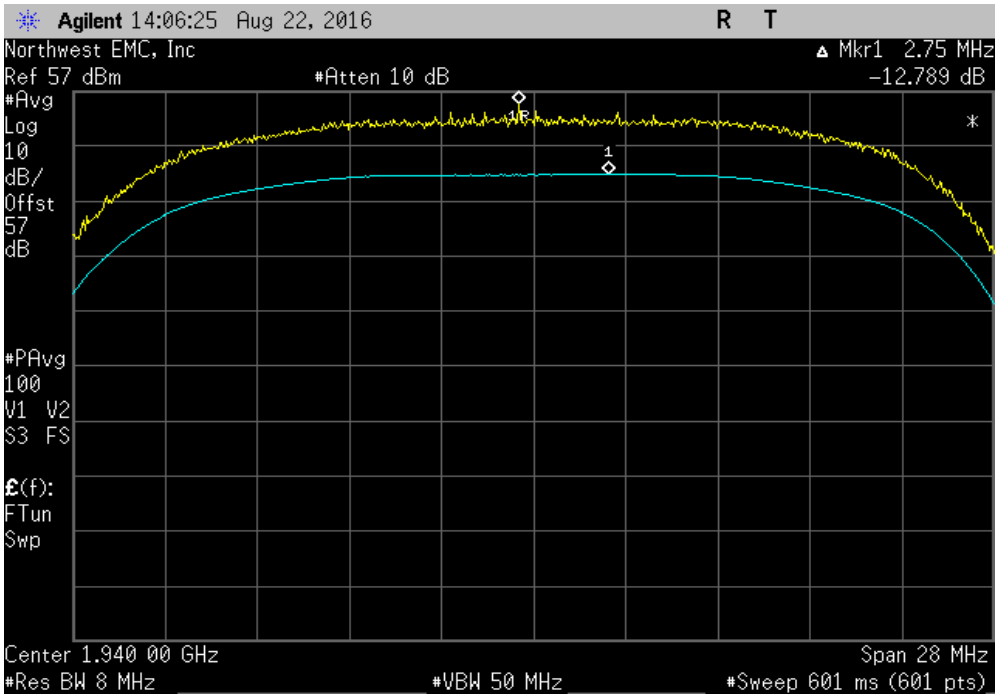
PEAK TO AVERAGE RATIO - LTE BAND 2

XMit 2016.05.06

Antenna Port 2, High Channel LTE10, 1985 MHz						
				Value (dB)	Limit < (dB)	Results
				9.77	13	Pass



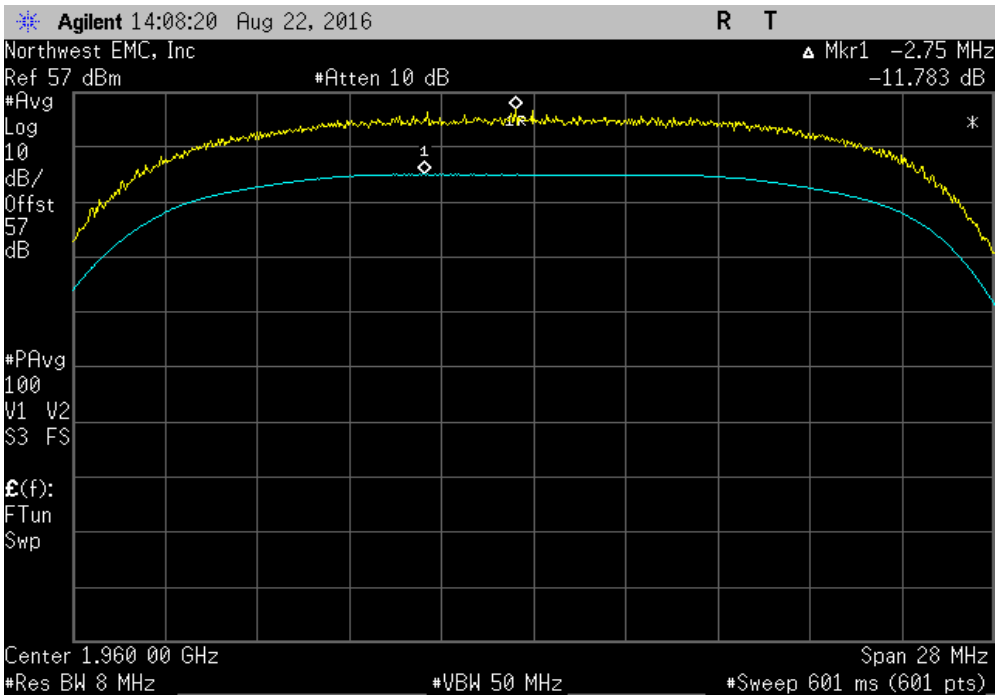
Antenna Port 2, Low Channel LTE20, 1940 MHz						
				Value (dB)	Limit < (dB)	Results
				12.789	13	Pass



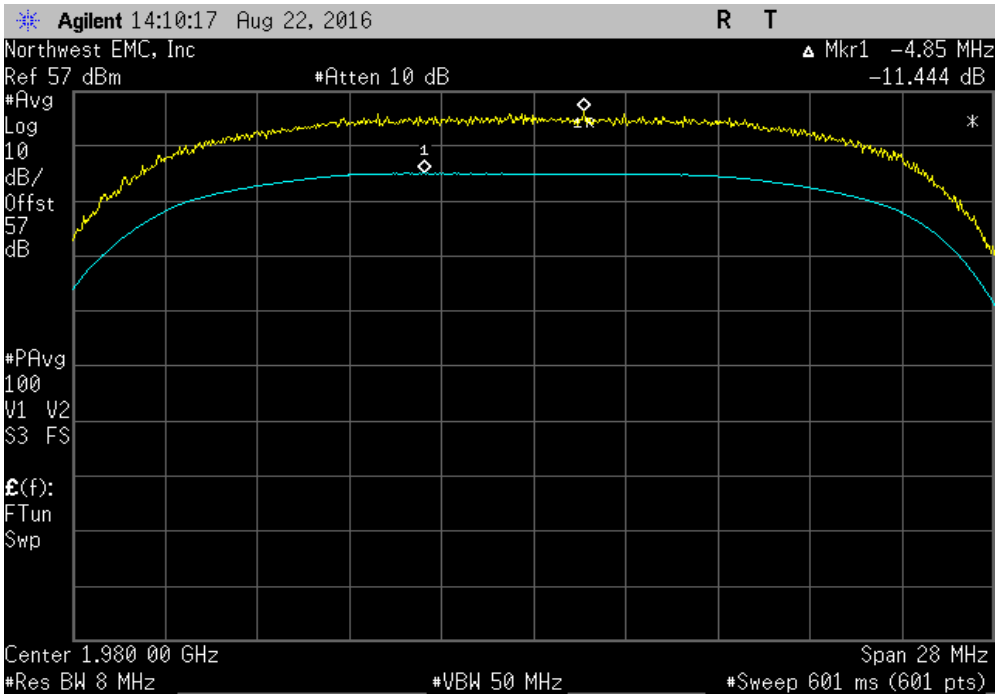
PEAK TO AVERAGE RATIO - LTE BAND 2

XMit 2016.05.06

Antenna Port 2, Mid Channel LTE20, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				11.78	13	Pass



Antenna Port 2, High Channel LTE20, 1980 MHz						
				Value (dB)	Limit < (dB)	Results
				11.444	13	Pass



PEAK TO AVERAGE RATIO - WCDMA

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

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

Because the conducted Output Power was measured using a RMS Average detector, the Peak to Average Ratio was measured to show that the maximum peak-max-hold spectrum to the maximum of the average spectrum does not exceed 13 dB.

The spectrum analyzer settings were as follows:
Span set to encompass the entire emission bandwidth, centered on the transmit channel.

The largest difference between the following two traces was calculated:
- 1st Trace: Peak detector and trace max-hold.
- 2nd Trace: The same procedure and settings as was used for conducted Output Power.

PEAK TO AVERAGE RATIO - WCDMA

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0076
Serial Number:	K163000003			**Date:**	09/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	21.6 °C
Attendees:	Edward Lee			**Humidity:**	49.8% RH
Project:	None			**Barometric Pres.:**	1016 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

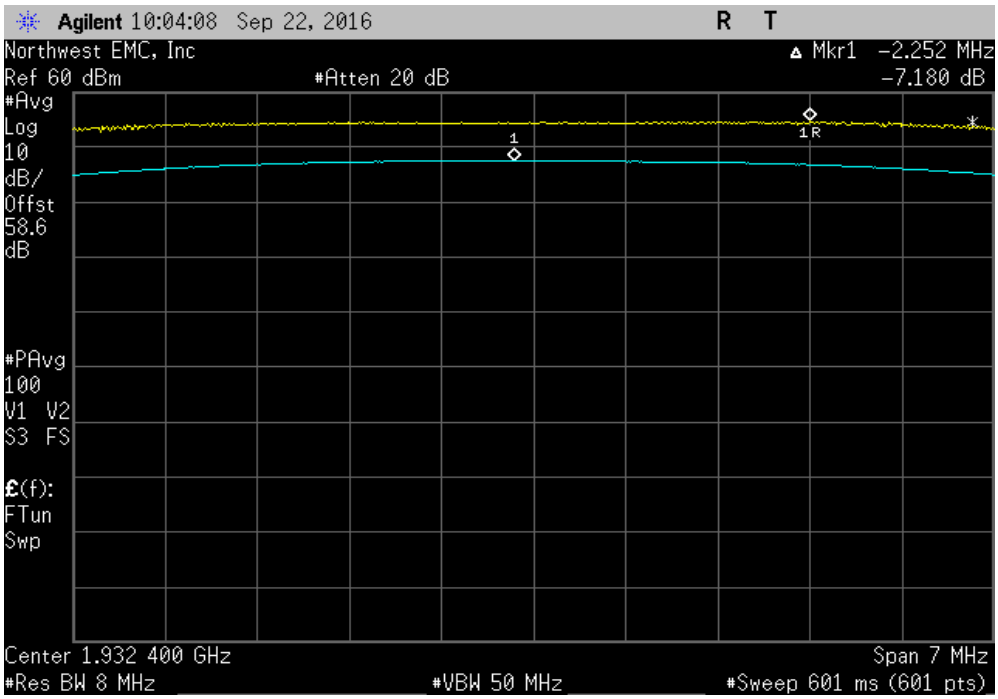
Configuration #	1	Signature

		Value (dB)	Limit < (dB)	Results
Antenna Port 1				
	Low Channel WCDMA, 1932.4 MHz	7.180	13	Pass
	Mid Channel WCDMA, 1960 MHz	7.236	13	Pass
	High Channel WCDMA, 1987.6 MHz	7.343	13	Pass
Antenna Port 2				
	Low Channel WCDMA, 1932.4 MHz	7.192	13	Pass
	Mid Channel WCDMA, 1960 MHz	7.220	13	Pass
	High Channel WCDMA, 1987.6 MHz	7.284	13	Pass

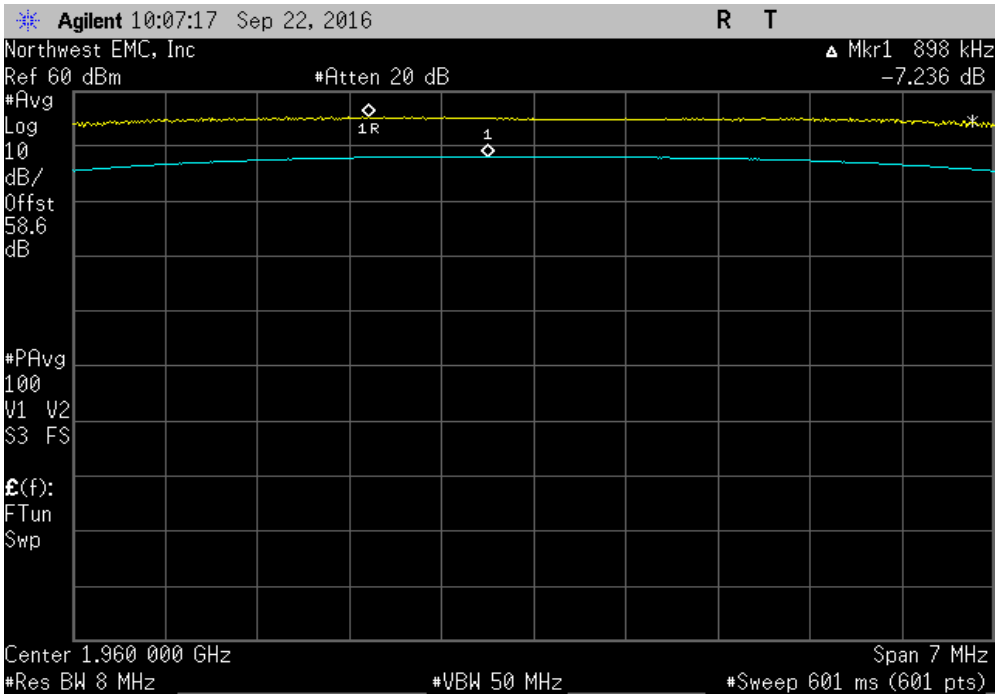
PEAK TO AVERAGE RATIO - WCDMA

XMit 2016.05.06

Antenna Port 1, Low Channel WCDMA, 1932.4 MHz						
				Value (dB)	Limit < (dB)	Results
				7.180	13	Pass



Antenna Port 1, Mid Channel WCDMA, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				7.236	13	Pass

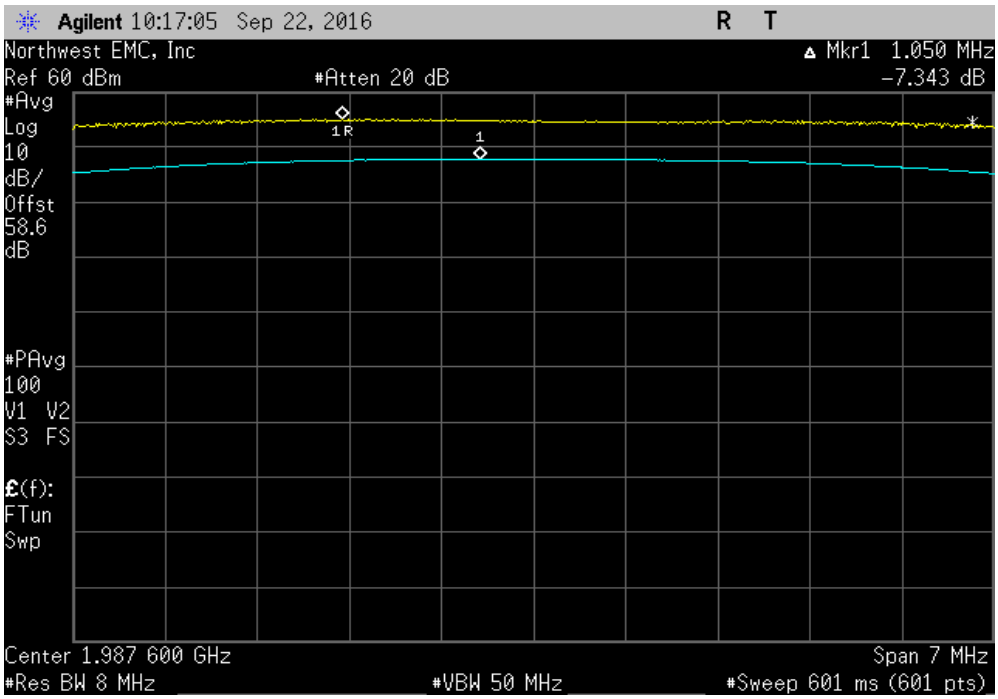


PEAK TO AVERAGE RATIO - WCDMA

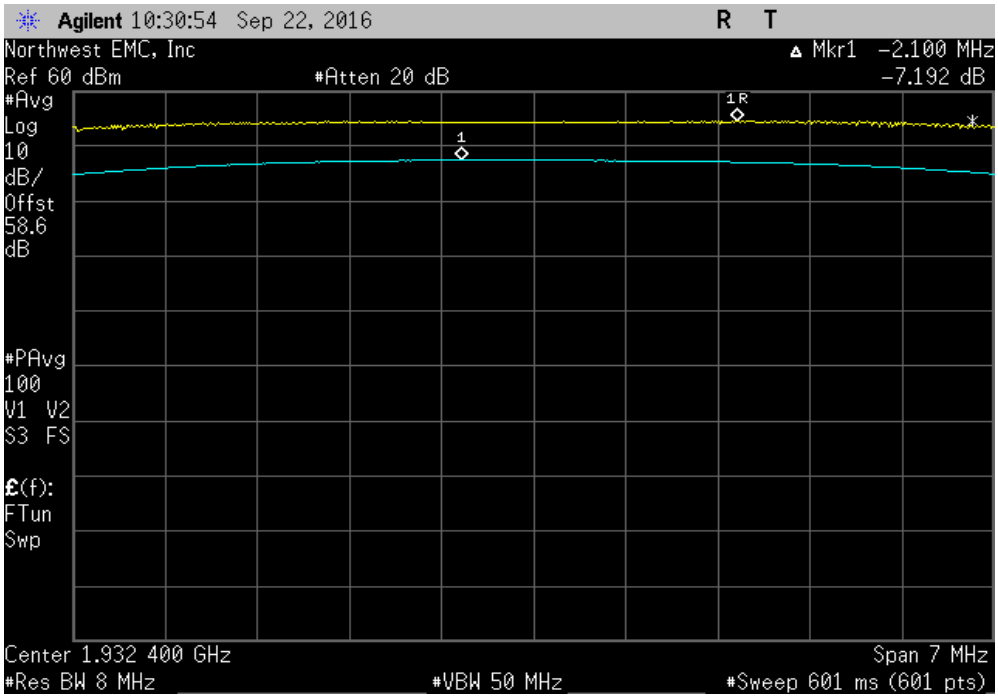
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, High Channel WCDMA, 1987.6 MHz						
				Value (dB)	Limit < (dB)	Results
				7.343	13	Pass



Antenna Port 2, Low Channel WCDMA, 1932.4 MHz						
				Value (dB)	Limit < (dB)	Results
				7.192	13	Pass

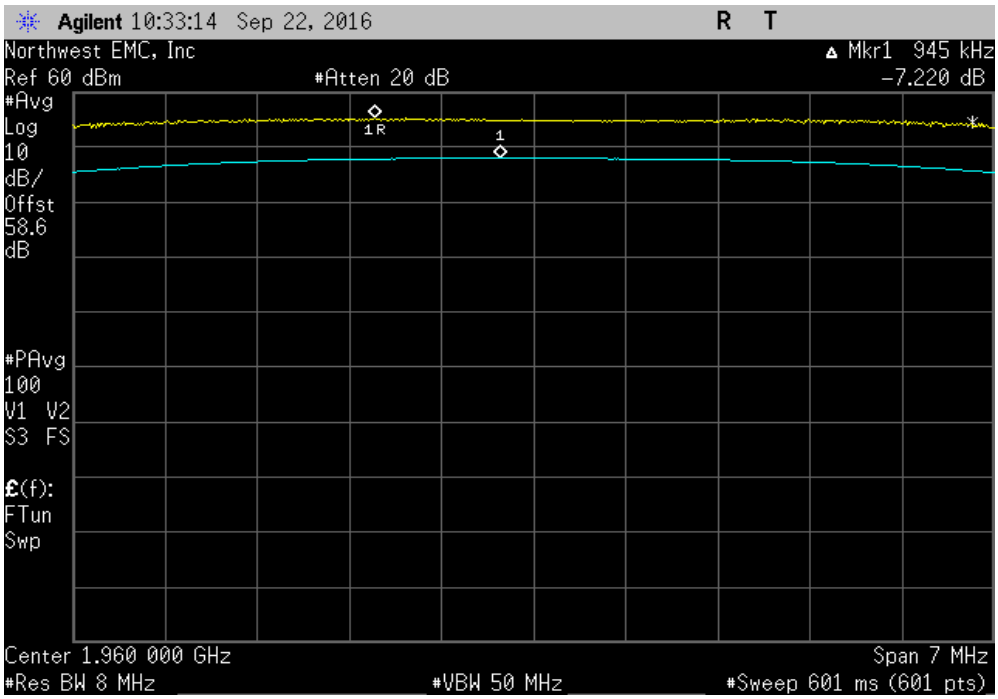


PEAK TO AVERAGE RATIO - WCDMA

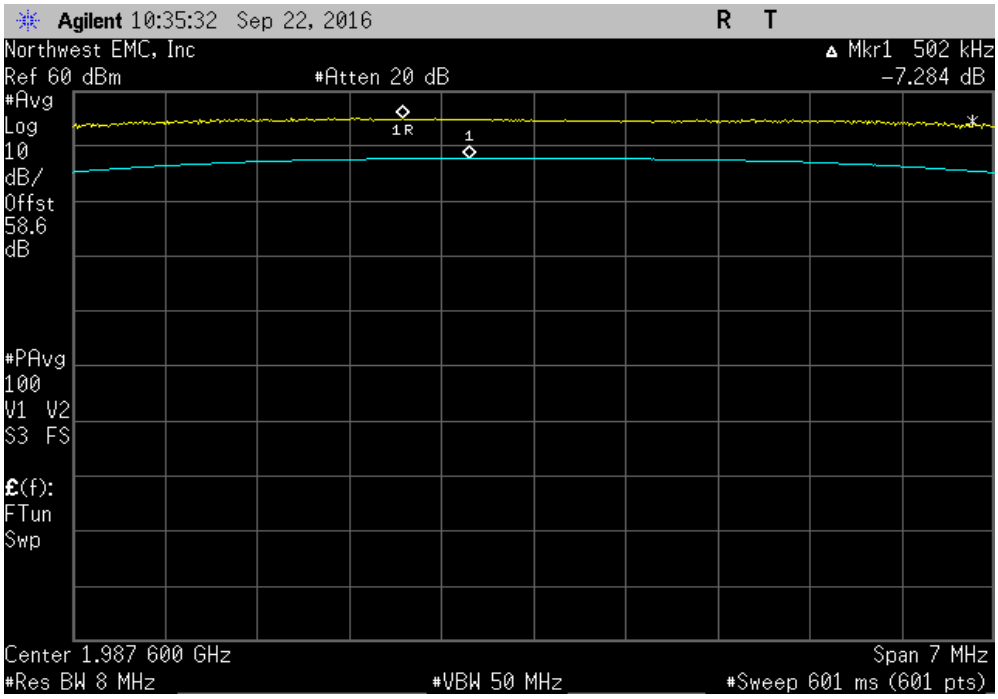
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, Mid Channel WCDMA, 1960 MHz						
				Value (dB)	Limit < (dB)	Results
				7.220	13	Pass



Antenna Port 2, High Channel WCDMA, 1987.6 MHz						
				Value (dB)	Limit < (dB)	Results
				7.284	13	Pass



BAND EDGE COMPLIANCE - LTE BAND 2

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

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

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in the available band. The channels closest to the band edges were selected. 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. The resolution bandwidth was set to approximately 1% of the measured emissions bandwidth within the first 1 MHz block adjacent to the transmit band. An average RMS detector was used to match the method used during Output Power. The screen capture shows the margin between the measured value and the limit at the band edge.

BAND EDGE COMPLIANCE - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0073
Serial Number:	K163000003			**Date:**	08/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	22.4 °C
Attendees:	Andy Ku			**Humidity:**	50% RH
Project:	None			**Barometric Pres.:**	1015 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

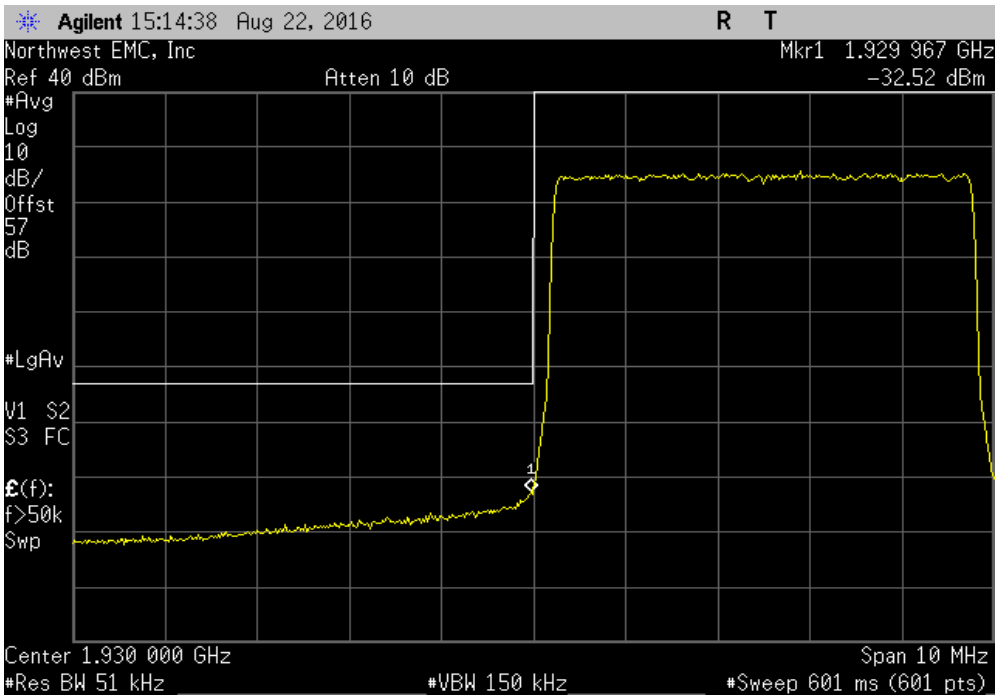
Configuration #	1	Signature

		Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result
Antenna Port 1					
	Low Channel LTE5, 1932.5 MHz	1.925 GHz - 1.935 GHz	-32.52	-13	Pass
	High Channel LTE5, 1987.5 MHz	1.985 GHz - 1.995 GHz	-30.75	-13	Pass
	Low Channel LTE10, 1935 MHz	1.92 GHz - 1.94 GHz	-32.98	-13	Pass
	High Channel LTE10, 1985 MHz	1.98 GHz - 2 GHz	-32.53	-13	Pass
	Low Channel LTE20, 1940 MHz	1.91 GHz - 1.95 GHz	-30.99	-13	Pass
	High Channel LTE20, 1980 MHz	1.97 GHz - 2.01 GHz	-30.61	-13	Pass
Antenna Port 2					
	Low Channel LTE5, 1932.5 MHz	1.925 GHz - 1.935 GHz	-32.29	-13	Pass
	High Channel LTE5, 1987.5 MHz	1.985 GHz - 1.995 GHz	-30.91	-13	Pass
	Low Channel LTE10, 1935 MHz	1.92 GHz - 1.94 GHz	-32.97	-13	Pass
	High Channel LTE10, 1985 MHz	1.98 GHz - 2 GHz	-32.23	-13	Pass
	Low Channel LTE20, 1940 MHz	1.91 GHz - 1.95 GHz	-31.86	-13	Pass
	High Channel LTE20, 1980 MHz	1.97 GHz - 2.01 GHz	-31.11	-13	Pass

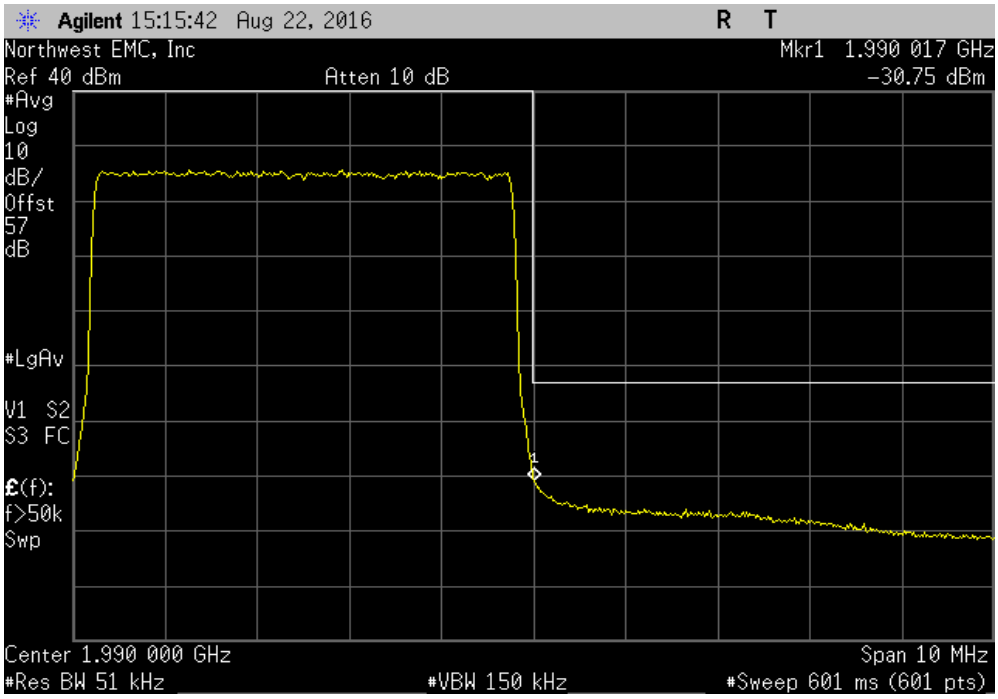
BAND EDGE COMPLIANCE - LTE BAND 2

XMit 2016.05.06

Antenna Port 1, Low Channel LTE5, 1932.5 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.925 GHz - 1.935 GHz		-32.52	-13	Pass



Antenna Port 1, High Channel LTE5, 1987.5 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.985 GHz - 1.995 GHz		-30.75	-13	Pass

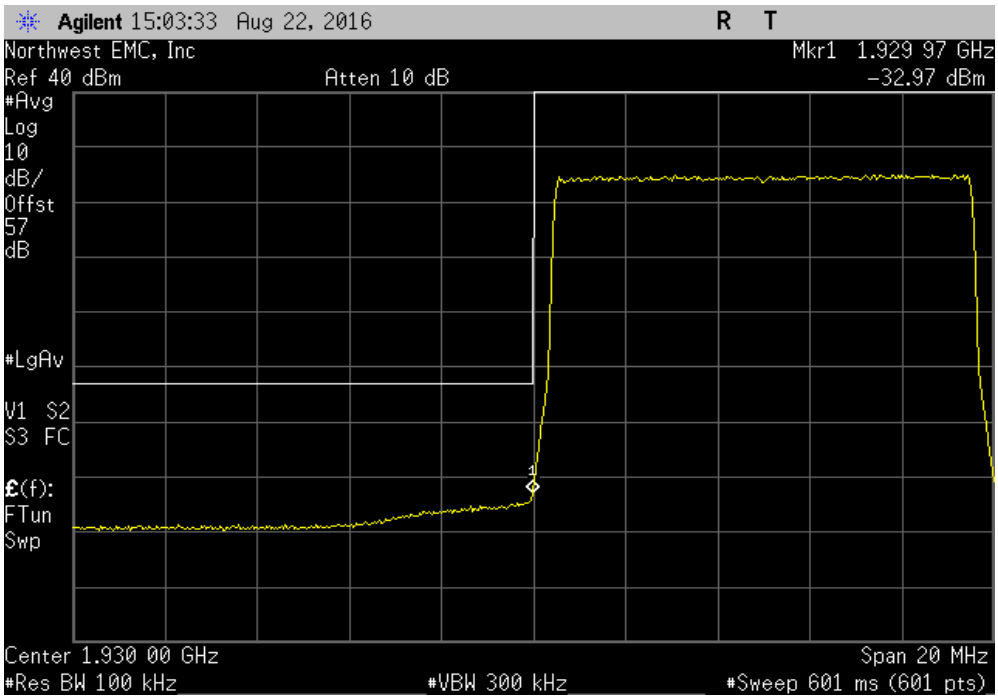


BAND EDGE COMPLIANCE - LTE BAND 2

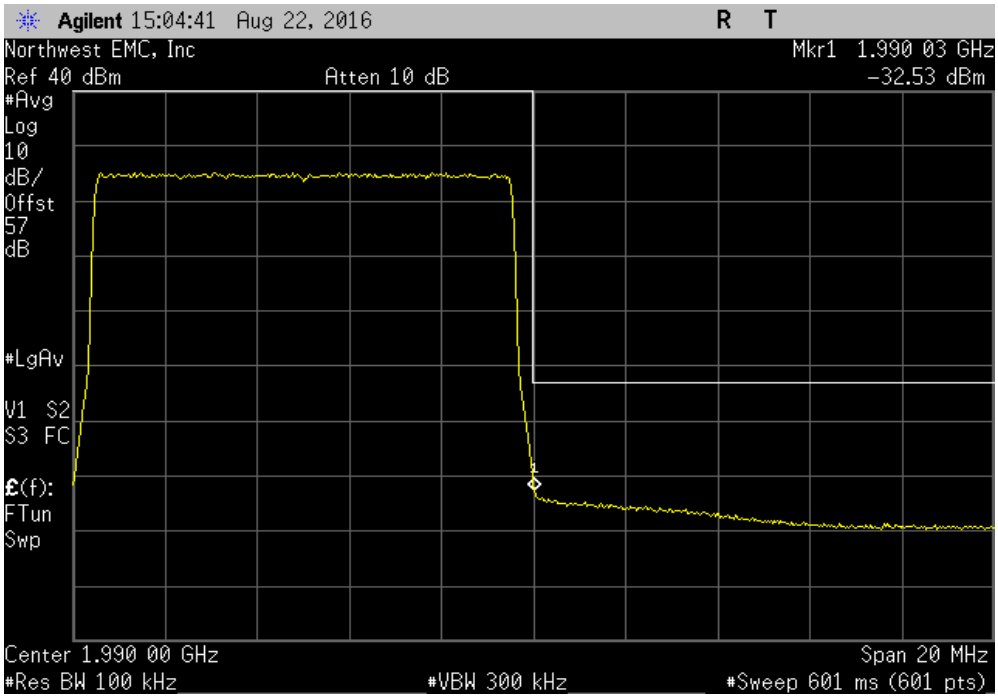
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, Low Channel LTE10, 1935 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.92 GHz - 1.94 GHz		-32.98	-13	Pass



Antenna Port 1, High Channel LTE10, 1985 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.98 GHz - 2 GHz		-32.53	-13	Pass

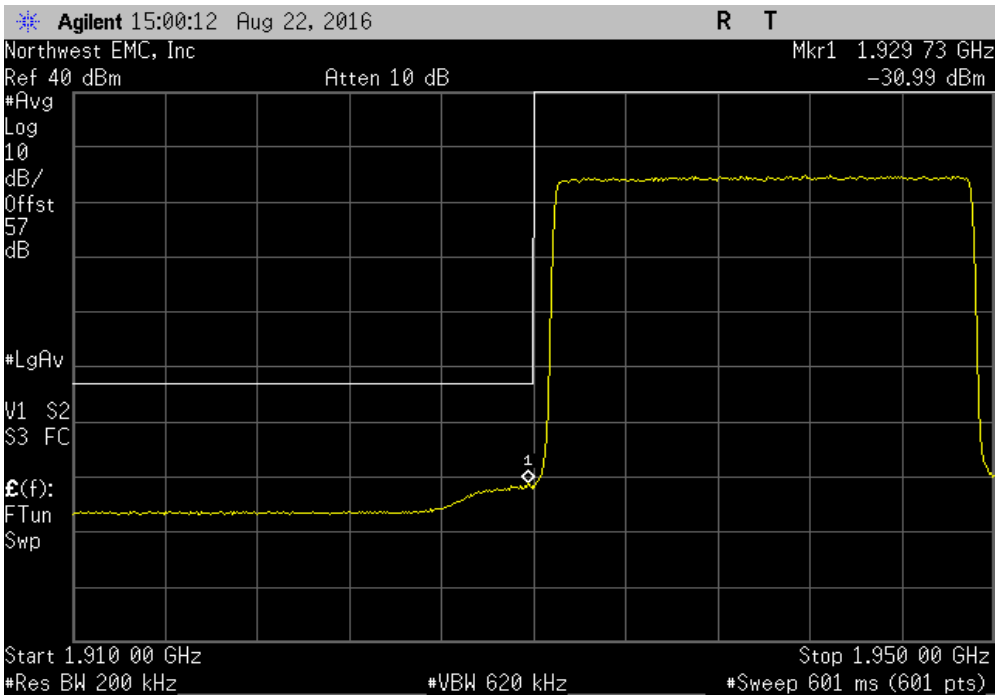


BAND EDGE COMPLIANCE - LTE BAND 2

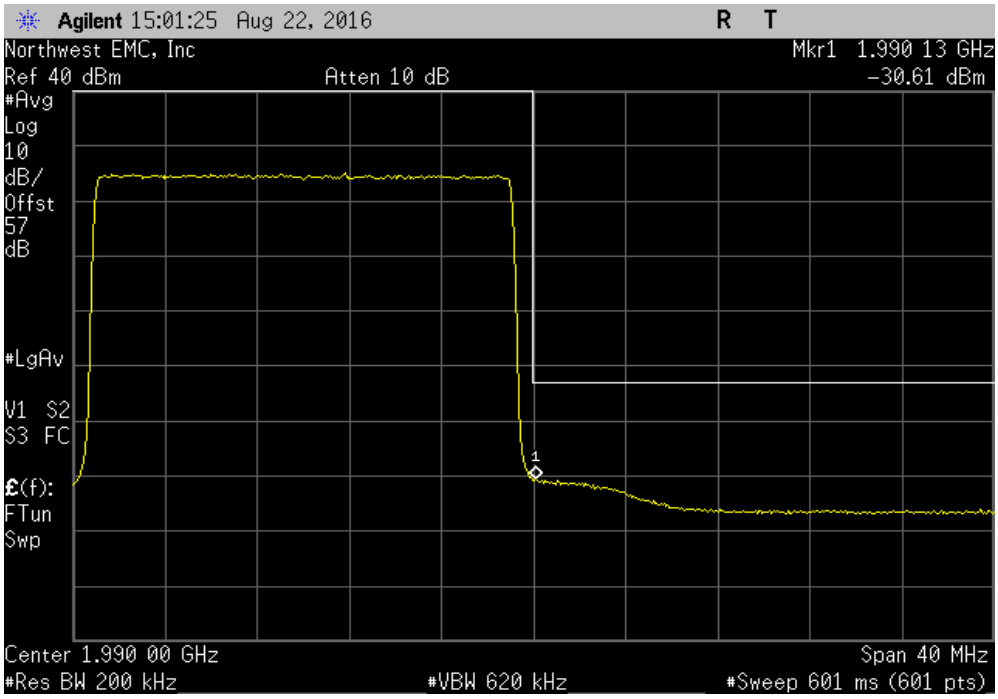
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, Low Channel LTE20, 1940 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.91 GHz - 1.95 GHz		-30.99	-13	Pass



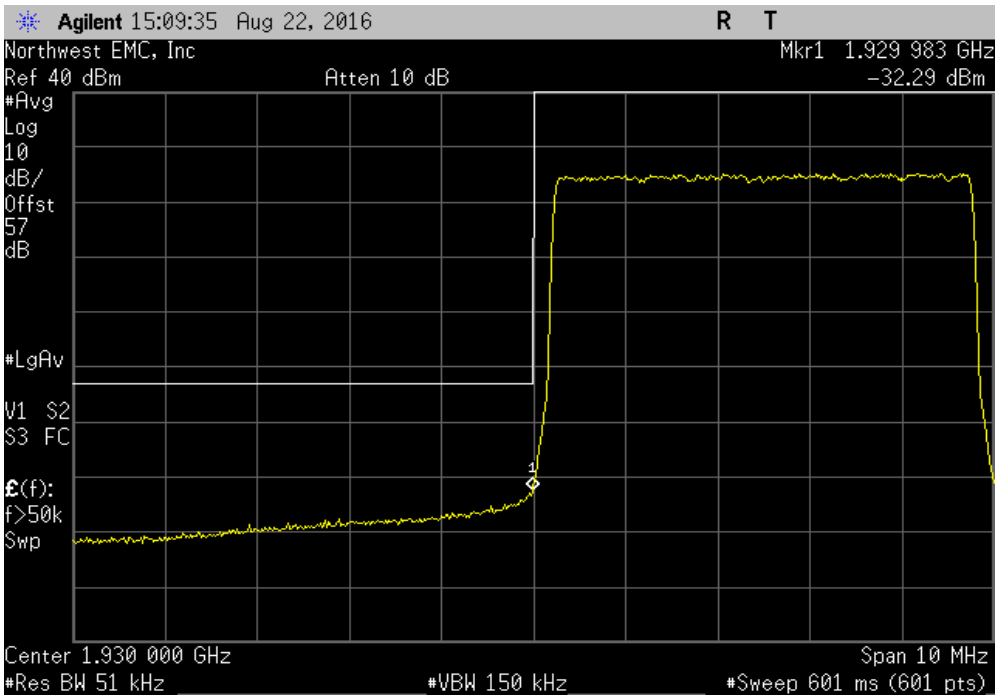
Antenna Port 1, High Channel LTE20, 1980 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.97 GHz - 2.01 GHz		-30.61	-13	Pass



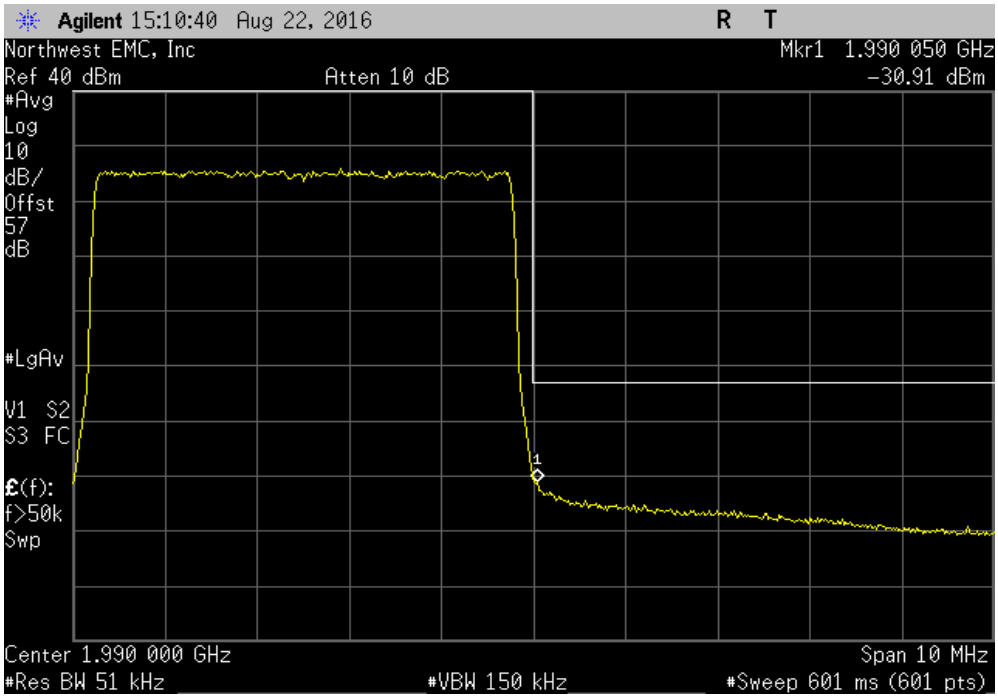
BAND EDGE COMPLIANCE - LTE BAND 2

XMit 2016.05.06

Antenna Port 2, Low Channel LTE5, 1932.5 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.925 GHz - 1.935 GHz		-32.29	-13	Pass



Antenna Port 2, High Channel LTE5, 1987.5 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.985 GHz - 1.995 GHz		-30.91	-13	Pass

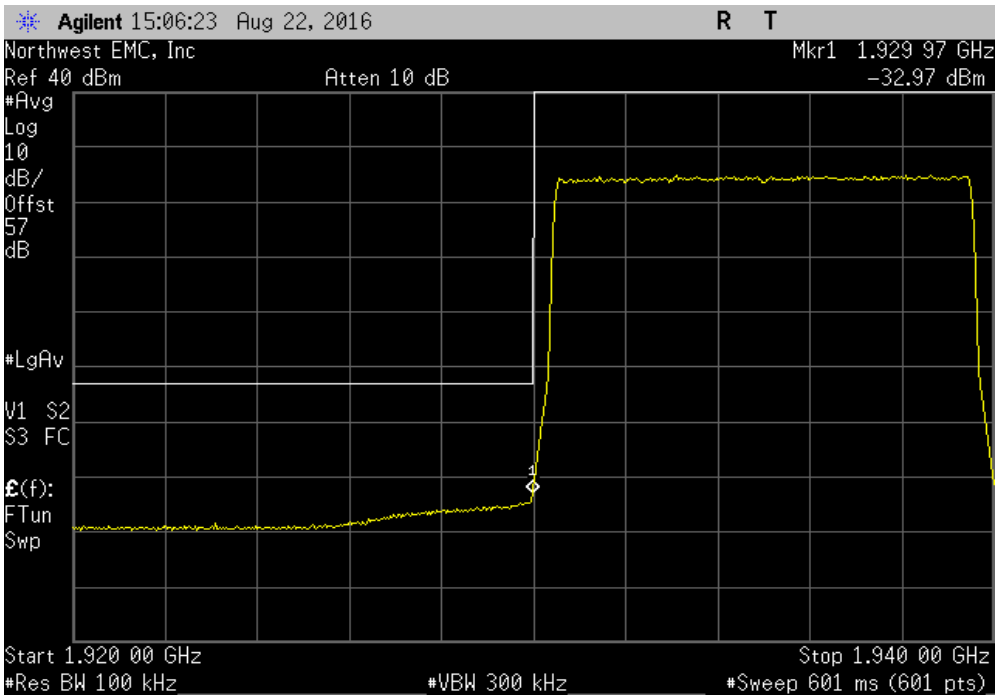


BAND EDGE COMPLIANCE - LTE BAND 2

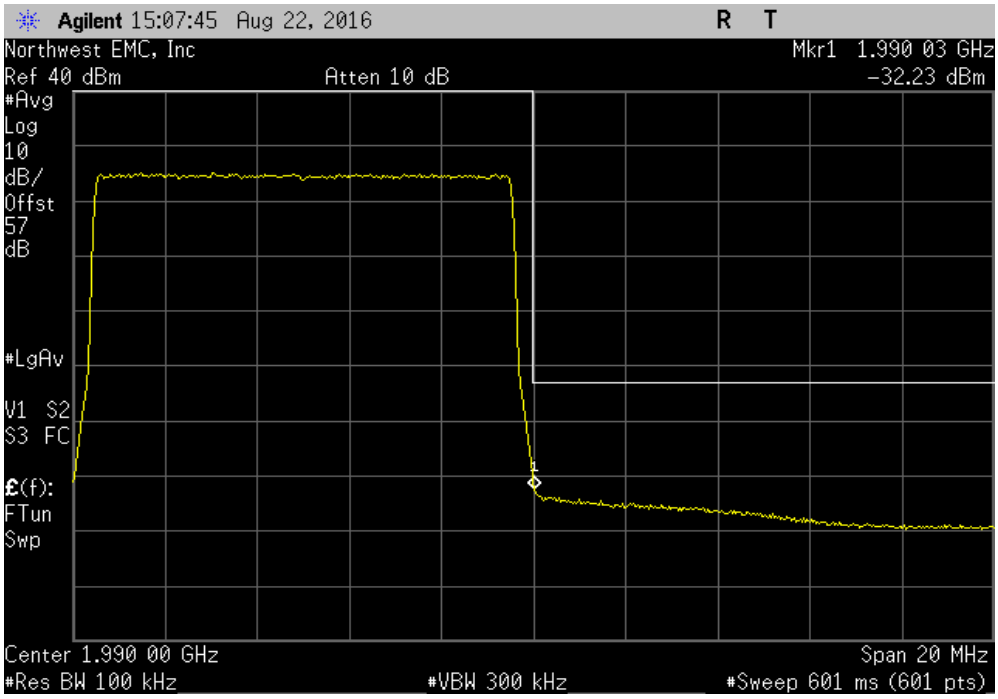
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, Low Channel LTE10, 1935 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.92 GHz - 1.94 GHz		-32.97	-13	Pass



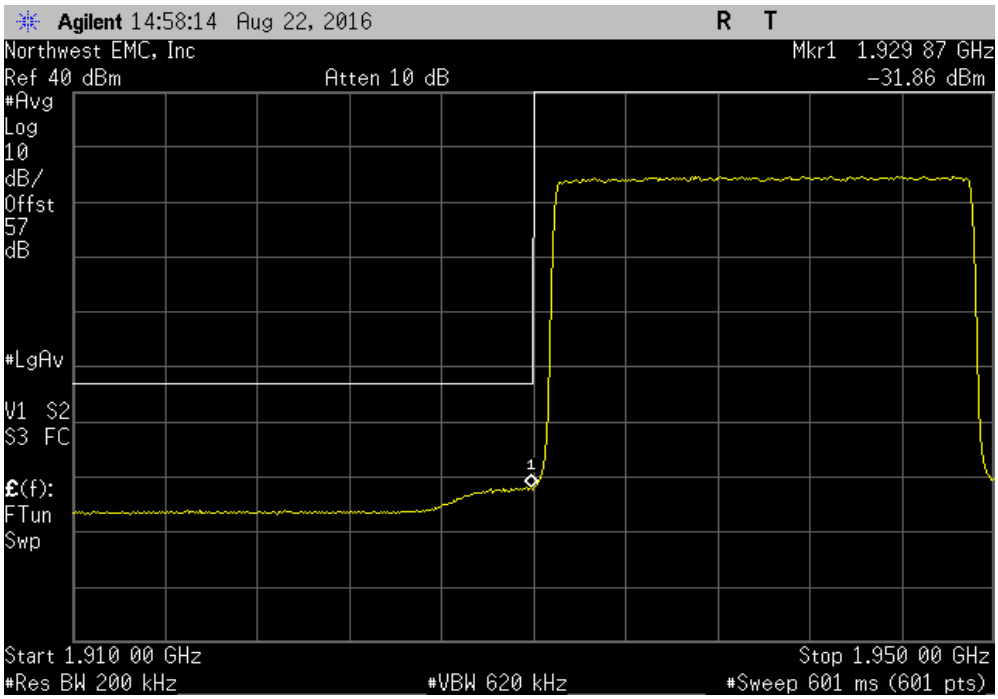
Antenna Port 2, High Channel LTE10, 1985 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.98 GHz - 2 GHz		-32.23	-13	Pass



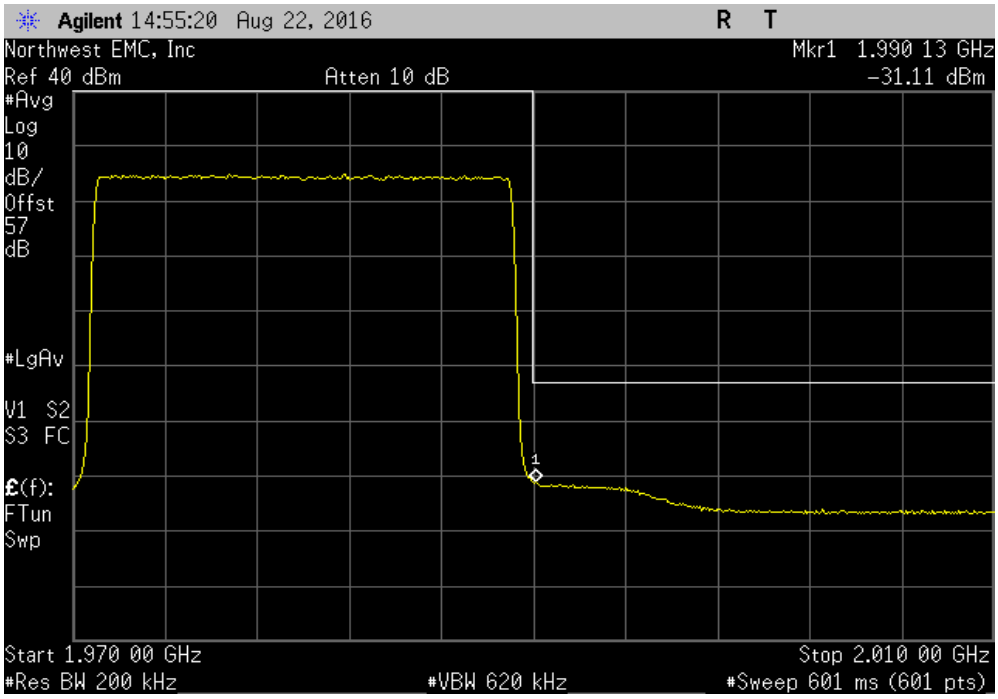
BAND EDGE COMPLIANCE - LTE BAND 2

XMit 2016.05.06

Antenna Port 2, Low Channel LTE20, 1940 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.91 GHz - 1.95 GHz		-31.86	-13	Pass



Antenna Port 2, High Channel LTE20, 1980 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.97 GHz - 2.01 GHz		-31.11	-13	Pass



BAND EDGE COMPLIANCE - WCDMA

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

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

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in the available band. The channels closest to the band edges were selected. 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. The resolution bandwidth was set to approximately 1% of the measured emissions bandwidth within the first 1 MHz block adjacent to the transmit band. An average RMS detector was used to match the method used during Output Power. The screen capture shows the margin between the measured value and the limit at the band edge.

BAND EDGE COMPLIANCE - WCDMA

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0076
Serial Number:	K163000003			**Date:**	09/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	21.6 °C
Attendees:	Edward Lee			**Humidity:**	49.8% RH
Project:	None			**Barometric Pres.:**	1016 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

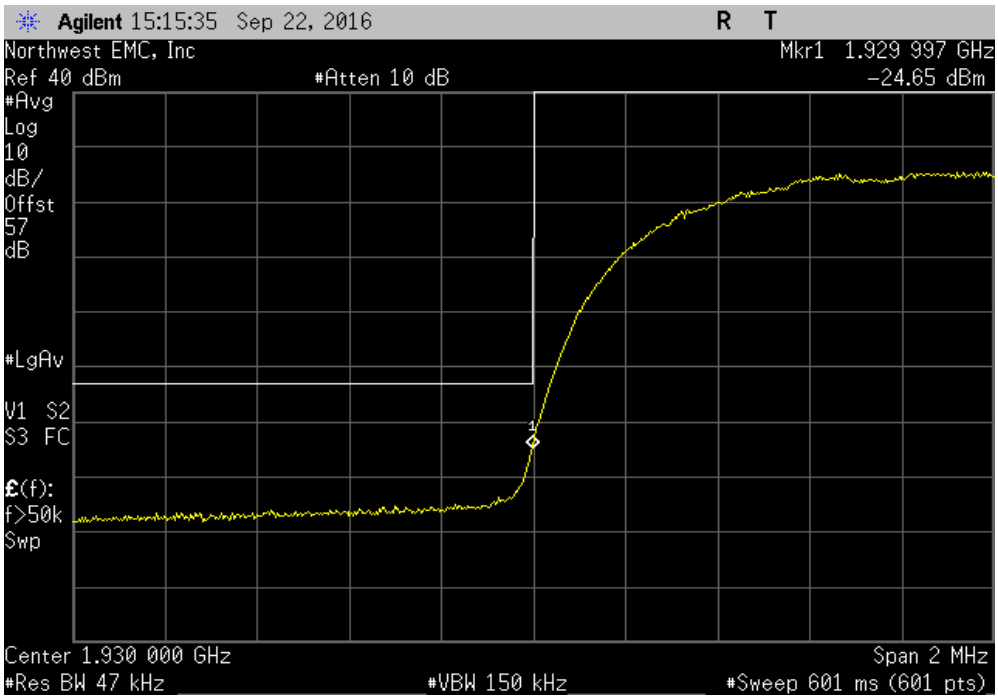
Configuration #	1	Signature

		Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result
Antenna Port 1					
	Low Channel WCDMA, 1932.4 MHz	1.929 GHz - 1.931 GHz	-24.65	-13	Pass
	High Channel WCDMA, 1987.6 MHz	1.989 GHz - 1.991 GHz	-21.98	-13	Pass
Antenna Port 2					
	Low Channel WCDMA, 1932.4 MHz	1.929 GHz - 1.931 GHz	-24.50	-13	Pass
	High Channel WCDMA, 1987.6 MHz	1.989 GHz - 1.991 GHz	-22.44	-13	Pass

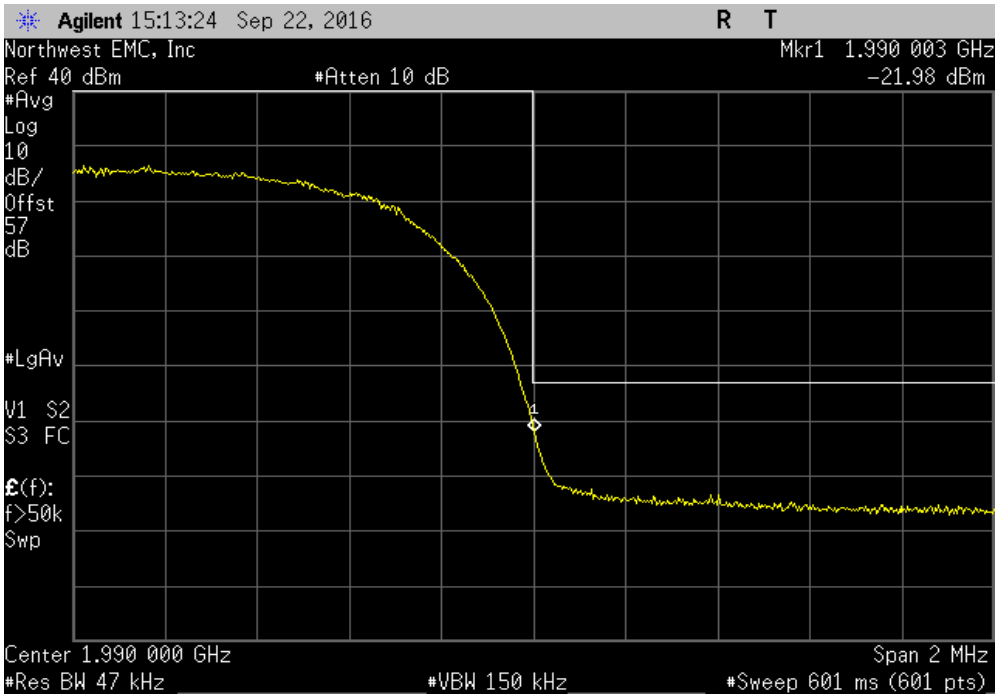
BAND EDGE COMPLIANCE - WCDMA

XMit 2016.05.06

Antenna Port 1, Low Channel WCDMA, 1932.4 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.929 GHz - 1.931 GHz		-24.65	-13	Pass



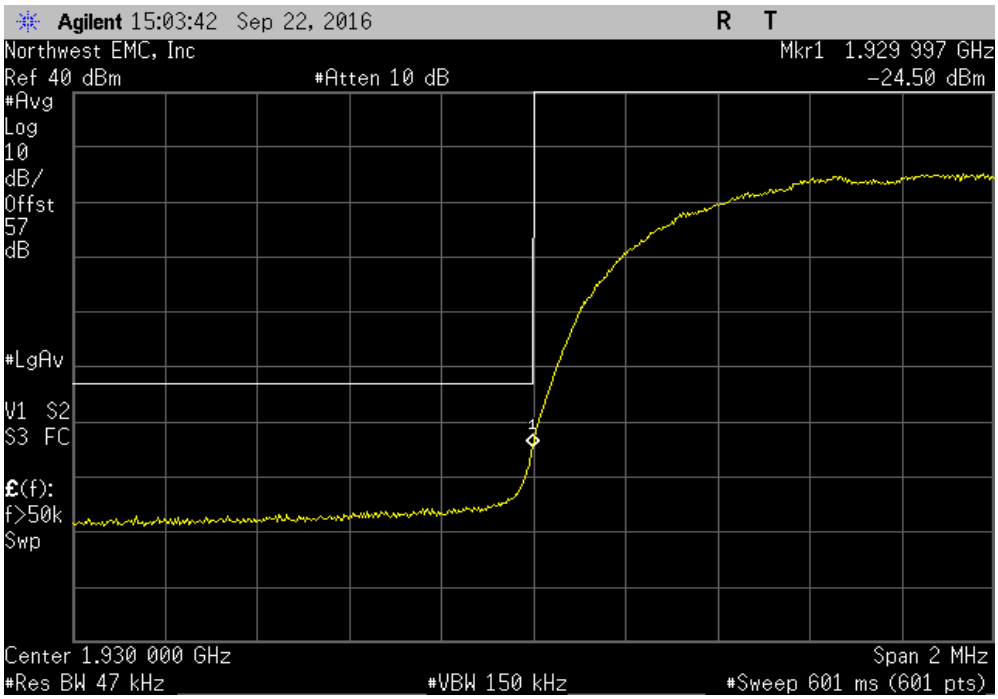
Antenna Port 1, High Channel WCDMA, 1987.6 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.989 GHz - 1.991 GHz		-21.98	-13	Pass



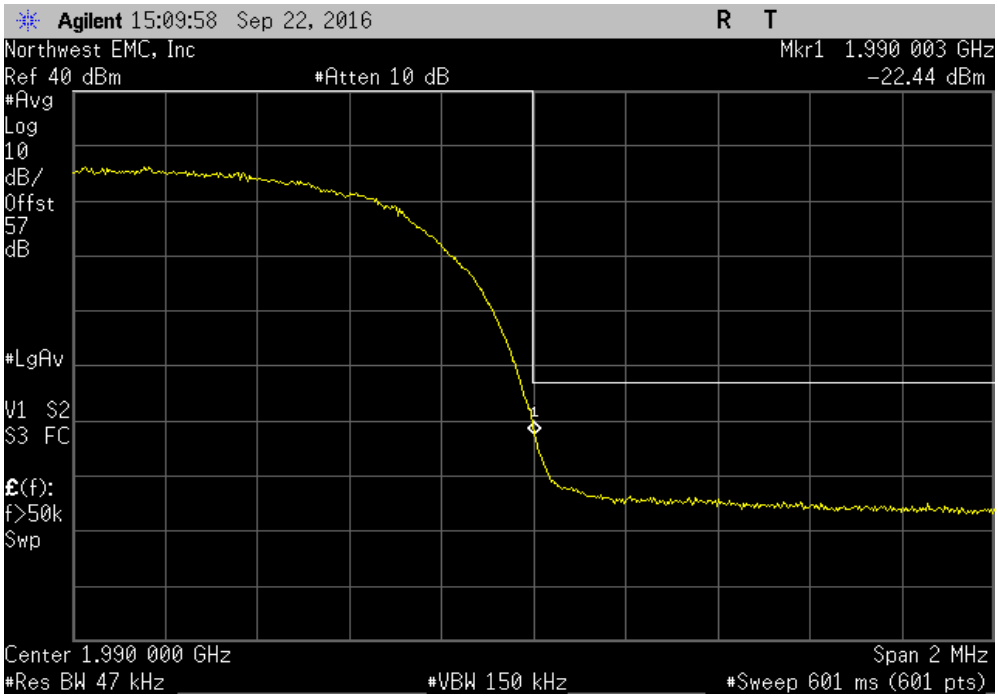
BAND EDGE COMPLIANCE - WCDMA

XMit 2016.05.06

Antenna Port 2, Low Channel WCDMA, 1932.4 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.929 GHz - 1.931 GHz		-24.50	-13	Pass



Antenna Port 2, High Channel WCDMA, 1987.6 MHz				
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result
1.989 GHz - 1.991 GHz		-22.44	-13	Pass



OCCUPIED BANDWIDTH - LTE BAND 2

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

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

The spectrum analyzer settings were as follows:
- RBW = Approx. 1% of the emission bandwidth (B). This was an iterative process to determine the RBW based on the emissions bandwidth (B).
- VBW= > RBW
- A peak detector was used
- Trace max hold.

The spectrum analyzer occupied bandwidth measurement function was then used to measure the 26 dB emission bandwidth.

There is no required limit to be met in the rule part for this test. The purpose of the test is to report the results.

OCCUPIED BANDWIDTH - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0073
Serial Number:	K163000003			**Date:**	08/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	22.4 °C
Attendees:	Andy Ku			**Humidity:**	50% RH
Project:	None			**Barometric Pres.:**	1015 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

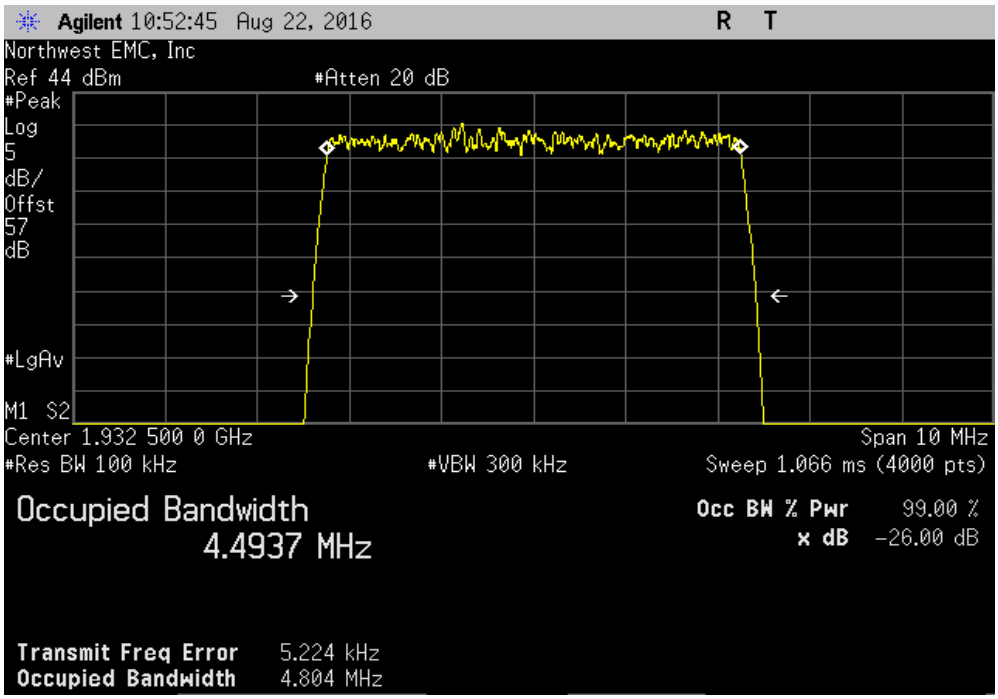
None

Configuration #	1	Signature

		Value	Limit	Result
Antenna Port 1				
	Low Channel LTE5, 1932.5 MHz	4.804 MHz	N/A	N/A
	Mid Channel LTE5, 1960 MHz	4.798 MHz	N/A	N/A
	High Channel LTE5, 1987.5 MHz	4.803 MHz	N/A	N/A
	Low Channel LTE10, 1935 MHz	9.564 MHz	N/A	N/A
	Mid Channel LTE10, 1960 MHz	9.565 MHz	N/A	N/A
	High Channel LTE10, 1985 MHz	9.538 MHz	N/A	N/A
	Low Channel LTE20, 1940 MHz	18.870 MHz	N/A	N/A
	Mid Channel LTE20, 1960 MHz	18.895 MHz	N/A	N/A
	High Channel LTE20, 1980 MHz	18.889 MHz	N/A	N/A
Antenna Port 2				
	Low Channel LTE5, 1932.5 MHz	4.788 MHz	N/A	N/A
	Mid Channel LTE5, 1960 MHz	4.794 MHz	N/A	N/A
	High Channel LTE5, 1987.5 MHz	4.807 MHz	N/A	N/A
	Low Channel LTE10, 1935 MHz	9.527 MHz	N/A	N/A
	Mid Channel LTE10, 1960 MHz	9.540 MHz	N/A	N/A
	High Channel LTE10, 1985 MHz	9.577 MHz	N/A	N/A
	Low Channel LTE20, 1940 MHz	18.903 MHz	N/A	N/A
	Mid Channel LTE20, 1960 MHz	18.892 MHz	N/A	N/A
	High Channel LTE20, 1980 MHz	18.854 MHz	N/A	N/A

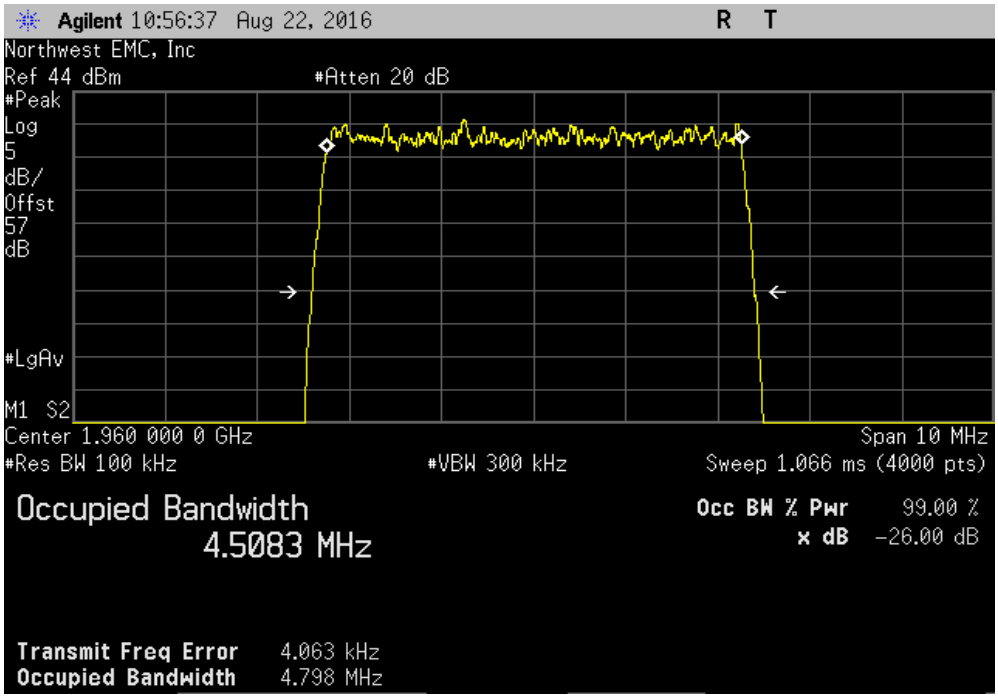
Antenna Port 1, Low Channel LTE5, 1932.5 MHz

				Value	Limit	Result
				4.804 MHz	N/A	N/A

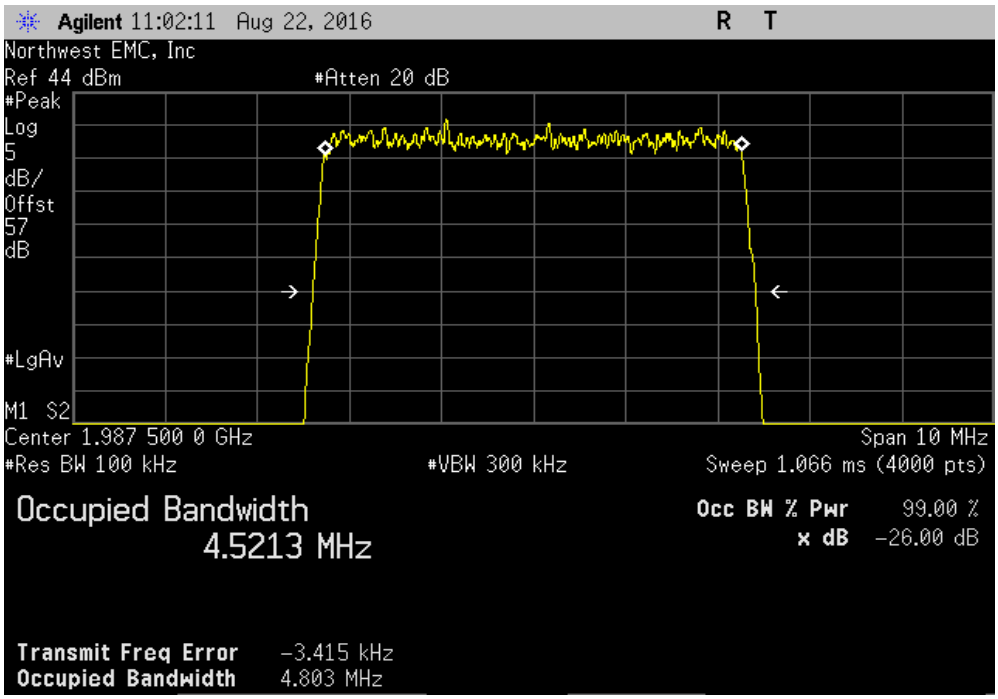


Antenna Port 1, Mid Channel LTE5, 1960 MHz

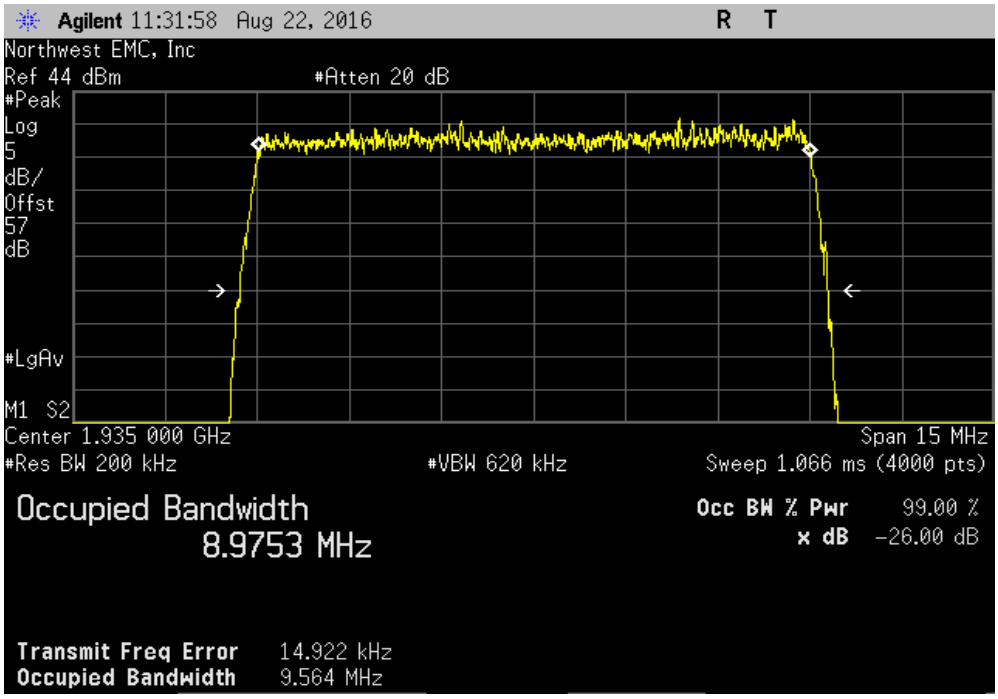
				Value	Limit	Result
				4.798 MHz	N/A	N/A



Antenna Port 1, High Channel LTE5, 1987.5 MHz						
				Value	Limit	Result
				4.803 MHz	N/A	N/A

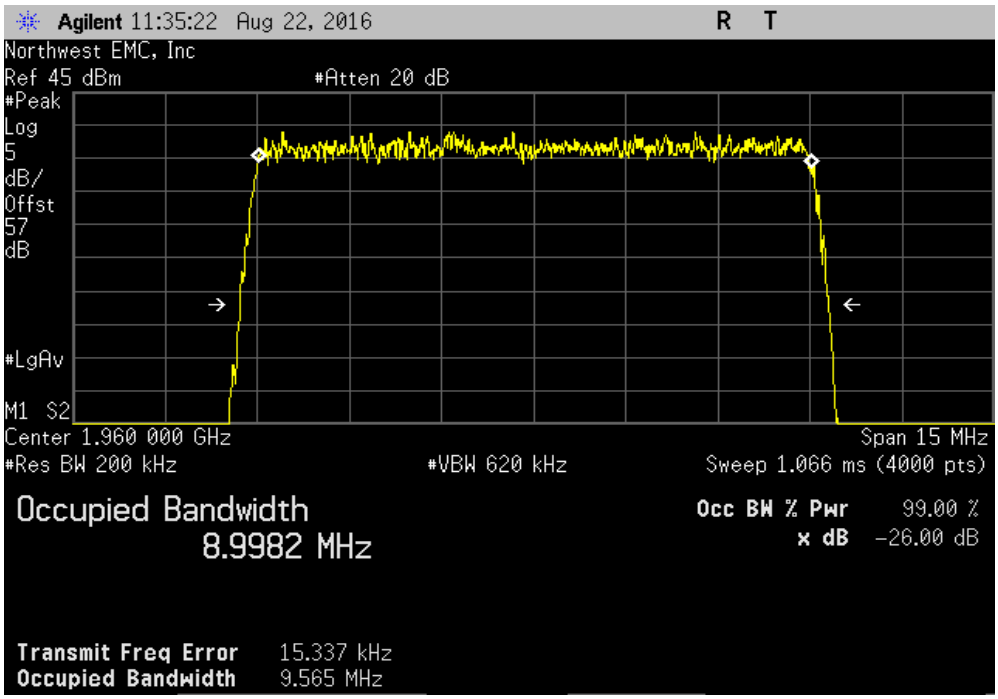


Antenna Port 1, Low Channel LTE10, 1935 MHz						
				Value	Limit	Result
				9.564 MHz	N/A	N/A



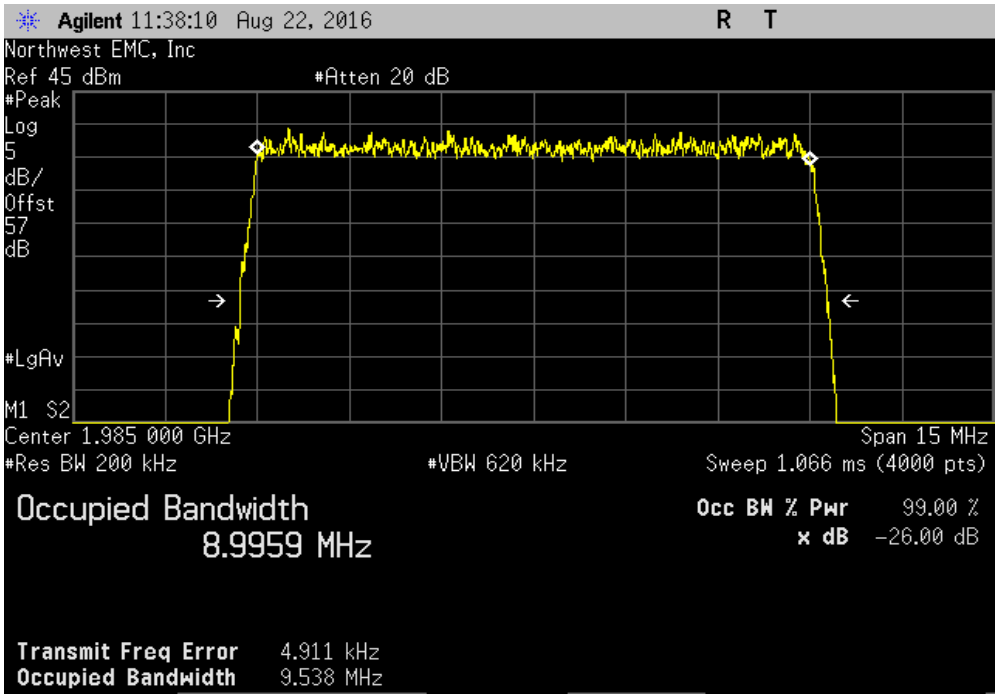
Antenna Port 1, Mid Channel LTE10, 1960 MHz

				Value	Limit	Result
				9.565 MHz	N/A	N/A



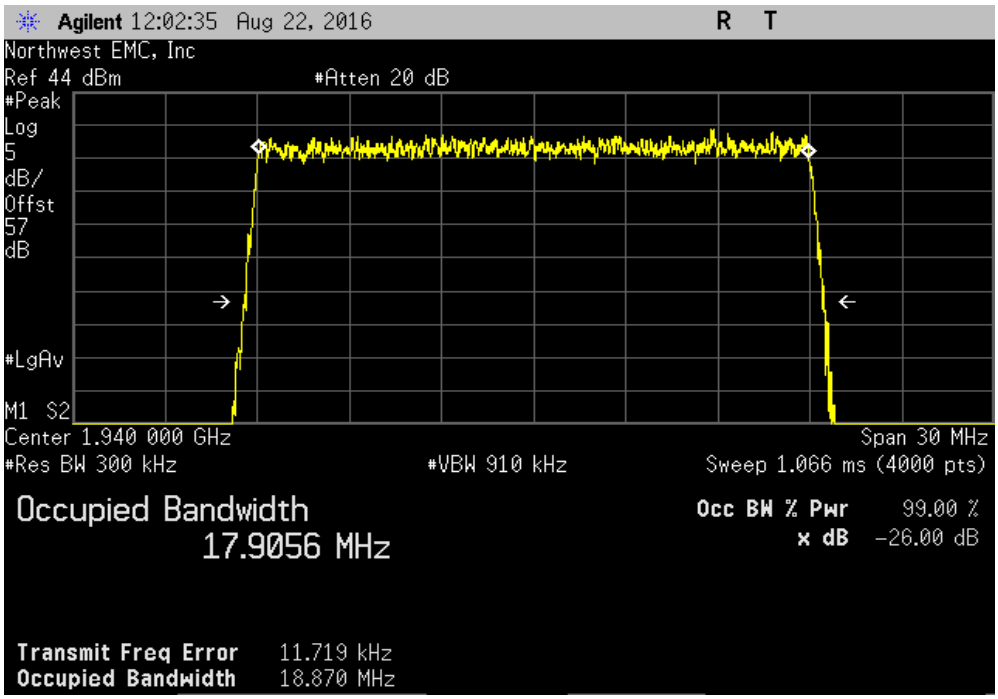
Antenna Port 1, High Channel LTE10, 1985 MHz

				Value	Limit	Result
				9.538 MHz	N/A	N/A



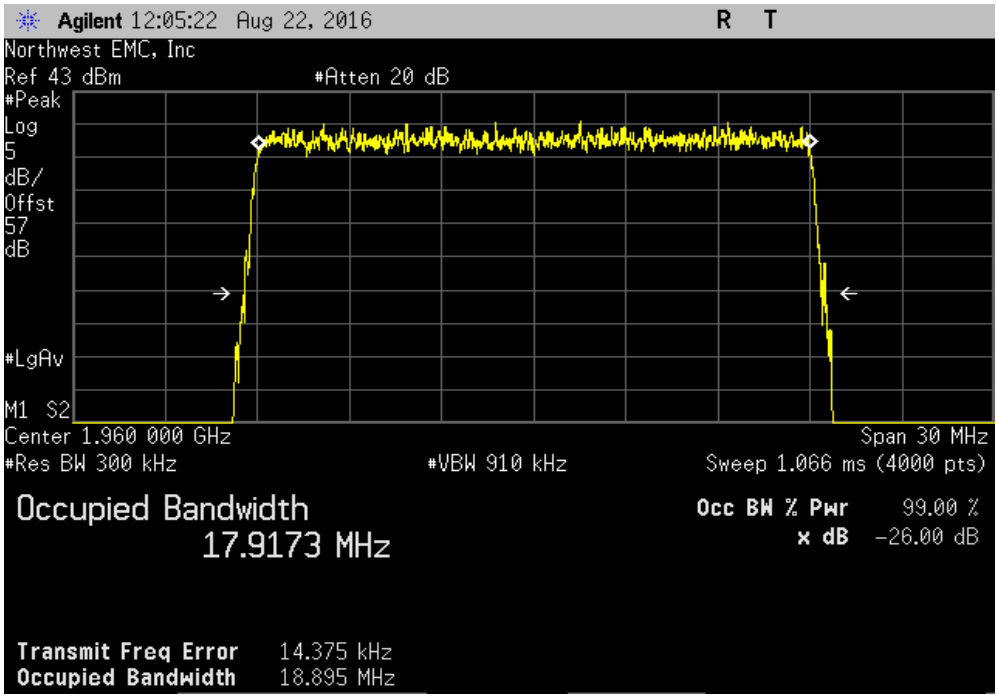
Antenna Port 1, Low Channel LTE20, 1940 MHz

				Value	Limit	Result
				18.870 MHz	N/A	N/A

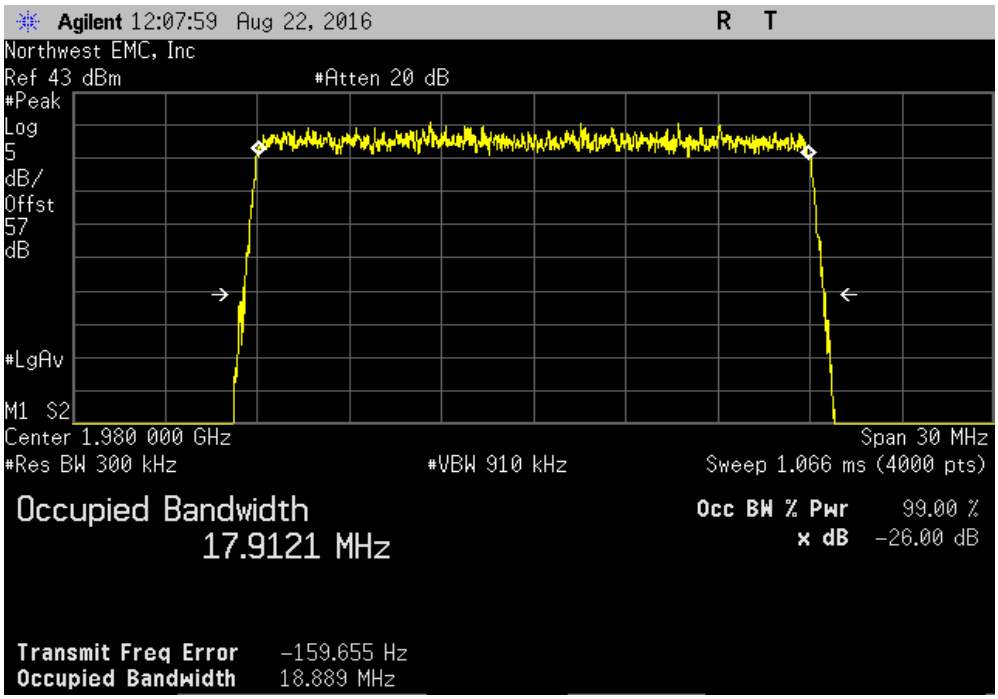


Antenna Port 1, Mid Channel LTE20, 1960 MHz

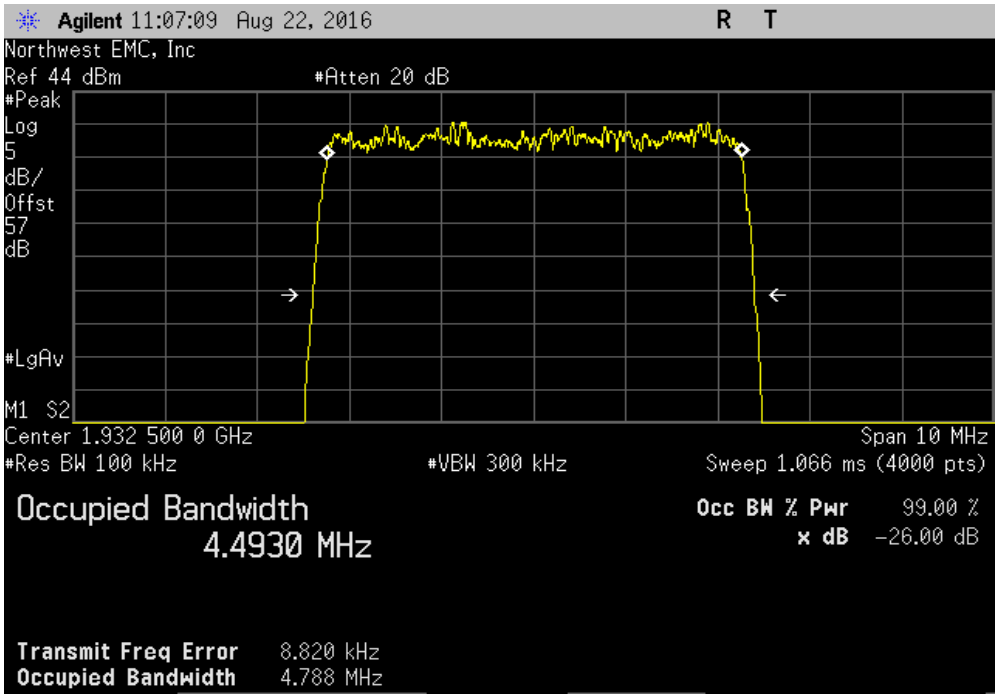
				Value	Limit	Result
				18.895 MHz	N/A	N/A



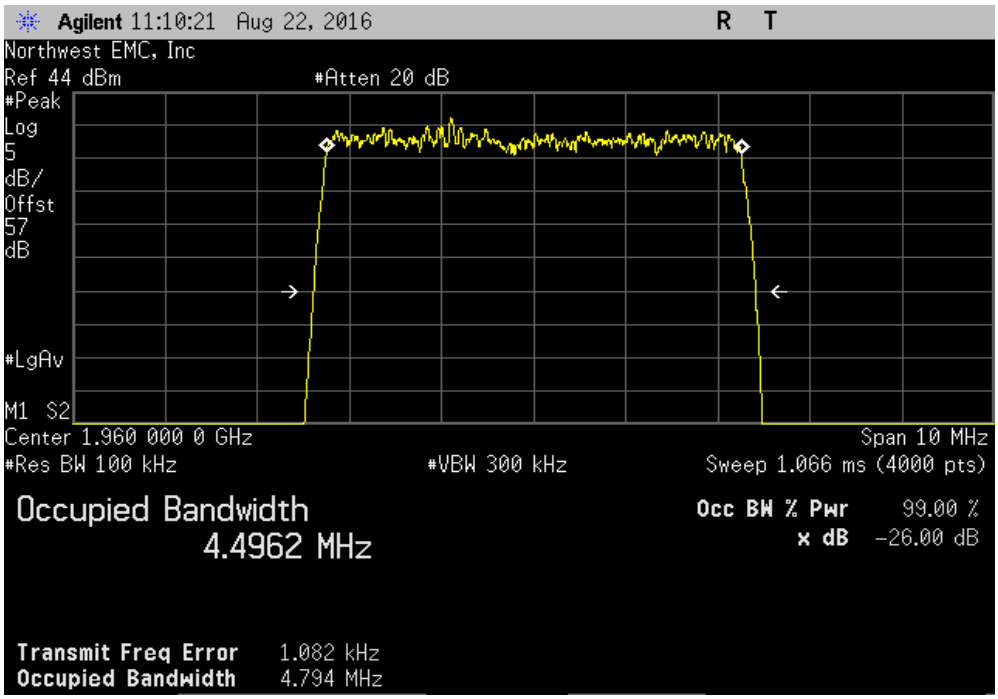
Antenna Port 1, High Channel LTE20, 1980 MHz						
				Value	Limit	Result
				18.889 MHz	N/A	N/A



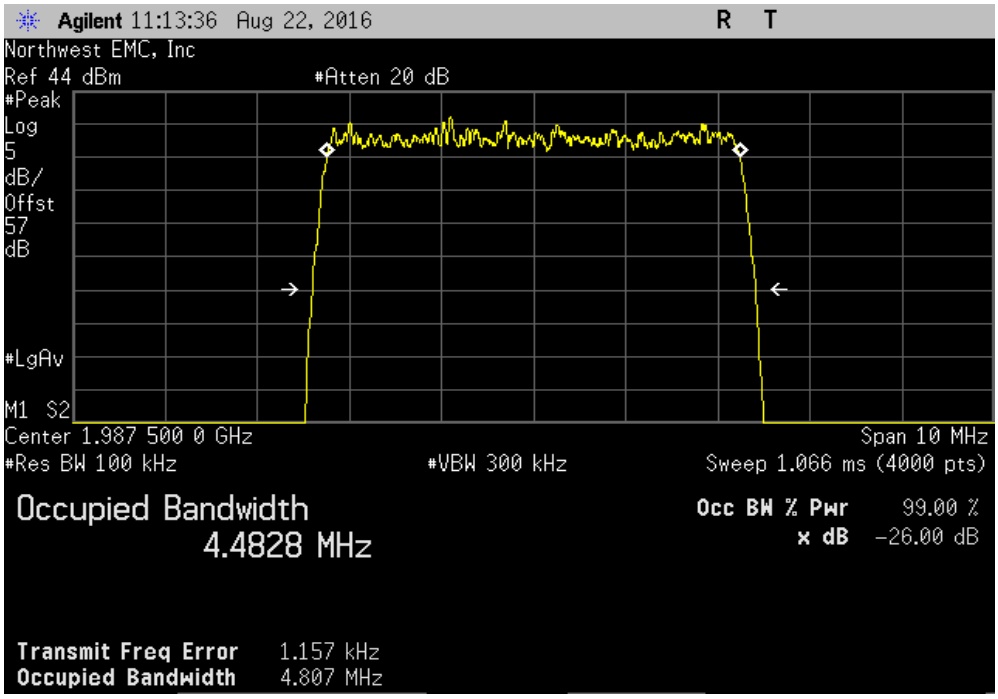
Antenna Port 2, Low Channel LTE5, 1932.5 MHz						
				Value	Limit	Result
				4.788 MHz	N/A	N/A



Antenna Port 2, Mid Channel LTE5, 1960 MHz						
				Value	Limit	Result
				4.794 MHz	N/A	N/A

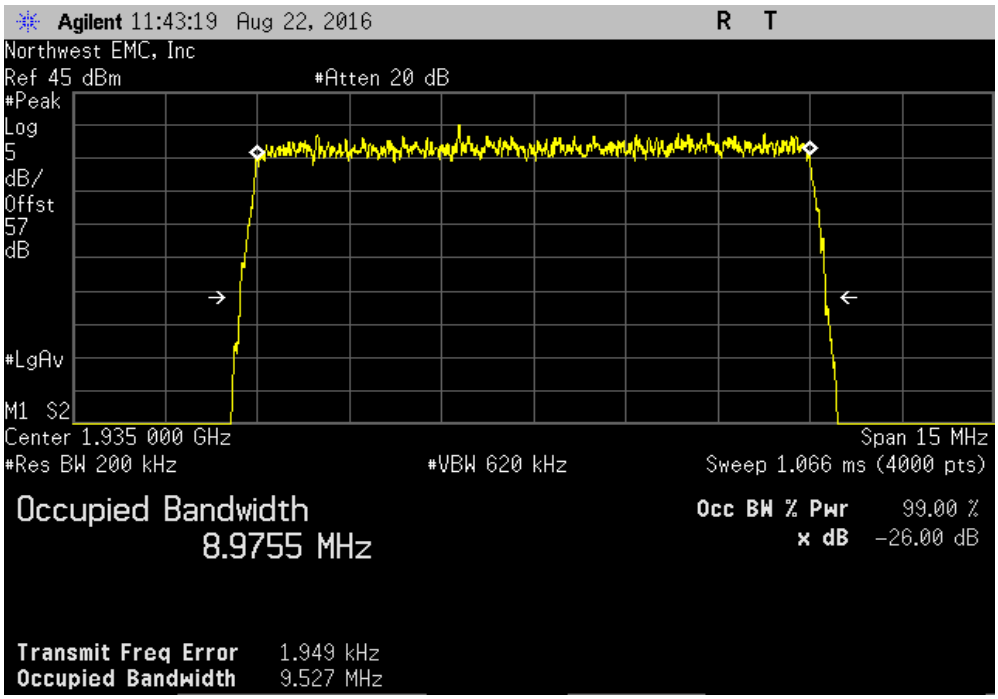


Antenna Port 2, High Channel LTE5, 1987.5 MHz						
				Value	Limit	Result
				4.807 MHz	N/A	N/A



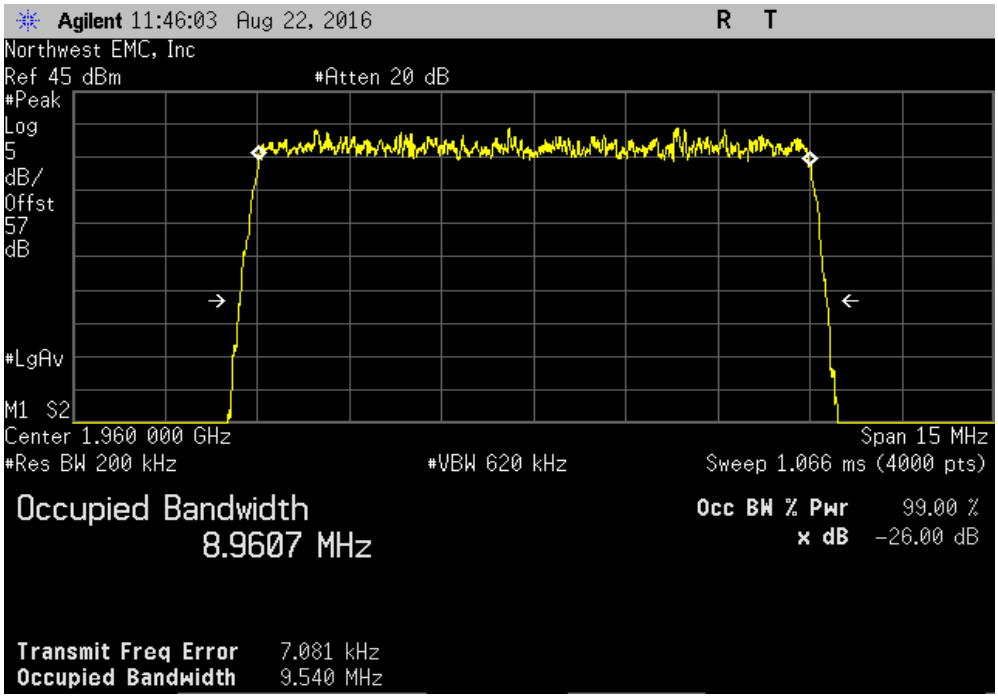
Antenna Port 2, Low Channel LTE10, 1935 MHz

				Value	Limit	Result
				9.527 MHz	N/A	N/A



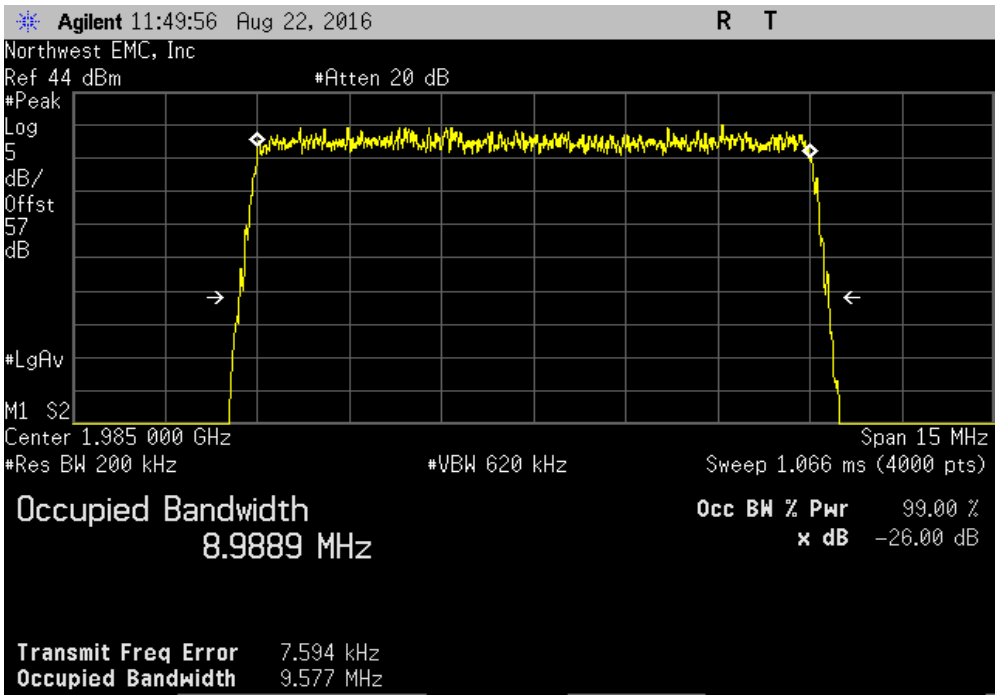
Antenna Port 2, Mid Channel LTE10, 1960 MHz

				Value	Limit	Result
				9.540 MHz	N/A	N/A



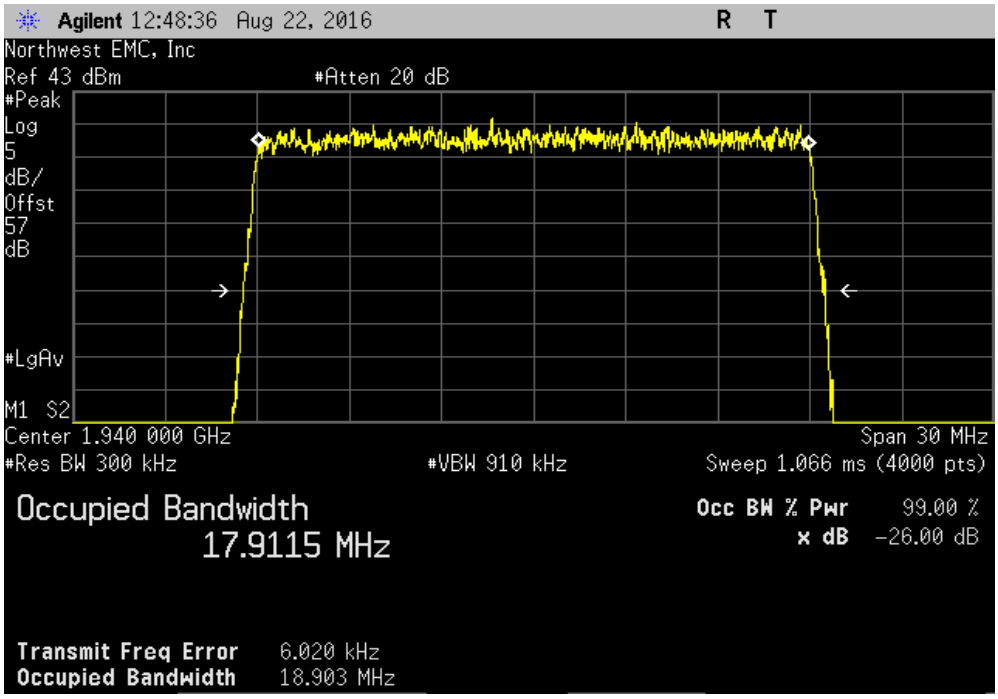
Antenna Port 2, High Channel LTE10, 1985 MHz

				Value	Limit	Result
				9.577 MHz	N/A	N/A

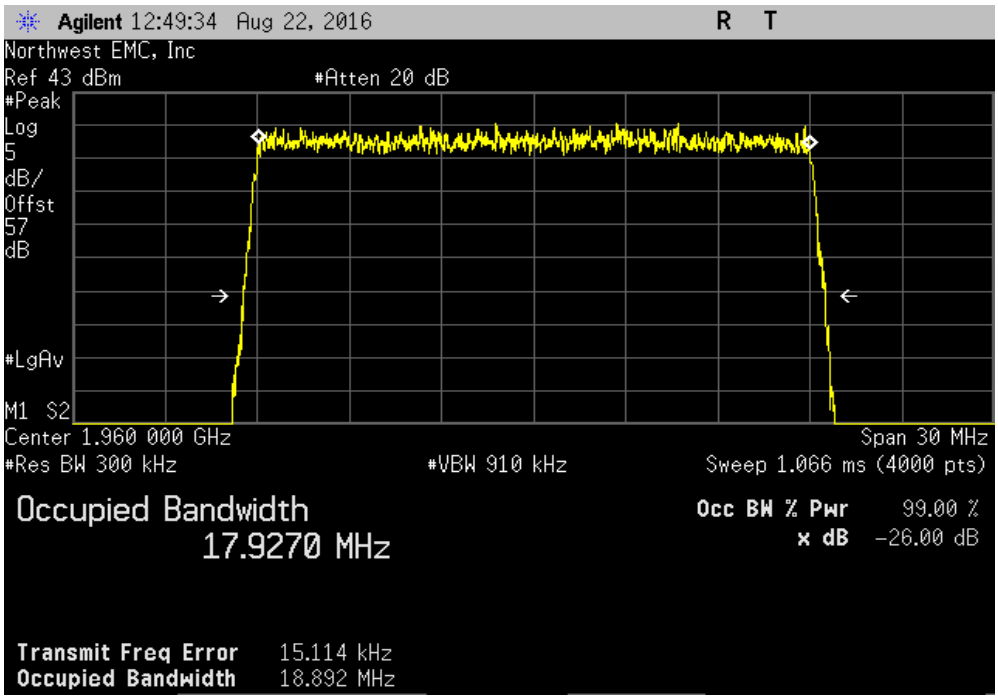


Antenna Port 2, Low Channel LTE20, 1940 MHz

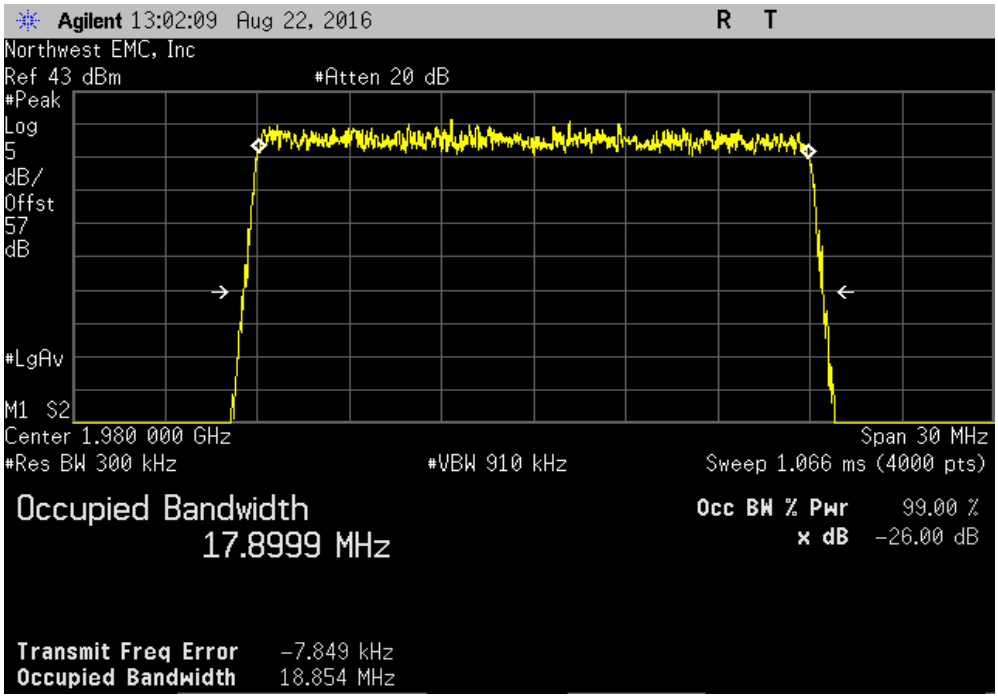
				Value	Limit	Result
				18.903 MHz	N/A	N/A



Antenna Port 2, Mid Channel LTE20, 1960 MHz						
				Value	Limit	Result
				18.892 MHz	N/A	N/A



Antenna Port 2, High Channel LTE20, 1980 MHz						
				Value	Limit	Result
				18.854 MHz	N/A	N/A



OCCUPIED BANDWIDTH - WCDMA

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

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

The spectrum analyzer settings were as follows:
- RBW = Approx. 1% of the emission bandwidth (B). This was an iterative process to determine the RBW based on the emissions bandwidth (B).
- VBW= > RBW
- A peak detector was used
- Trace max hold.

The spectrum analyzer occupied bandwidth measurement function was then used to measure the 26 dB emission bandwidth.

There is no required limit to be met in the rule part for this test. The purpose of the test is to report the results.

OCCUPIED BANDWIDTH - WCDMA

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0076
Serial Number:	K163000003			**Date:**	09/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	21.6 °C
Attendees:	Edward Lee			**Humidity:**	49.8% RH
Project:	None			**Barometric Pres.:**	1016 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

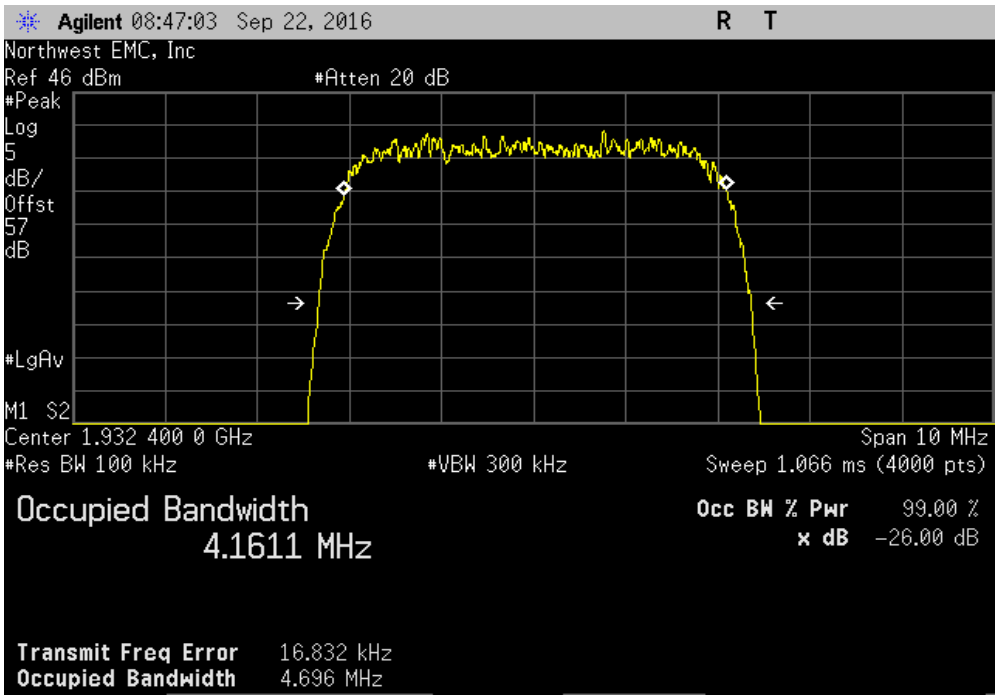
None

Configuration #	1	Signature

		Value	Limit	Result
Antenna Port 1				
	Low Channel WCDMA, 1932.4 MHz	4.696 MHz	N/A	N/A
	Mid Channel WCDMA, 1960 MHz	4.695 MHz	N/A	N/A
	High Channel WCDMA, 1987.6 MHz	4.686 MHz	N/A	N/A
Antenna Port 2				
	Low Channel WCDMA, 1932.4 MHz	4.675 MHz	N/A	N/A
	Mid Channel WCDMA, 1960 MHz	4.699 MHz	N/A	N/A
	High Channel WCDMA, 1987.6 MHz	4.684 MHz	N/A	N/A

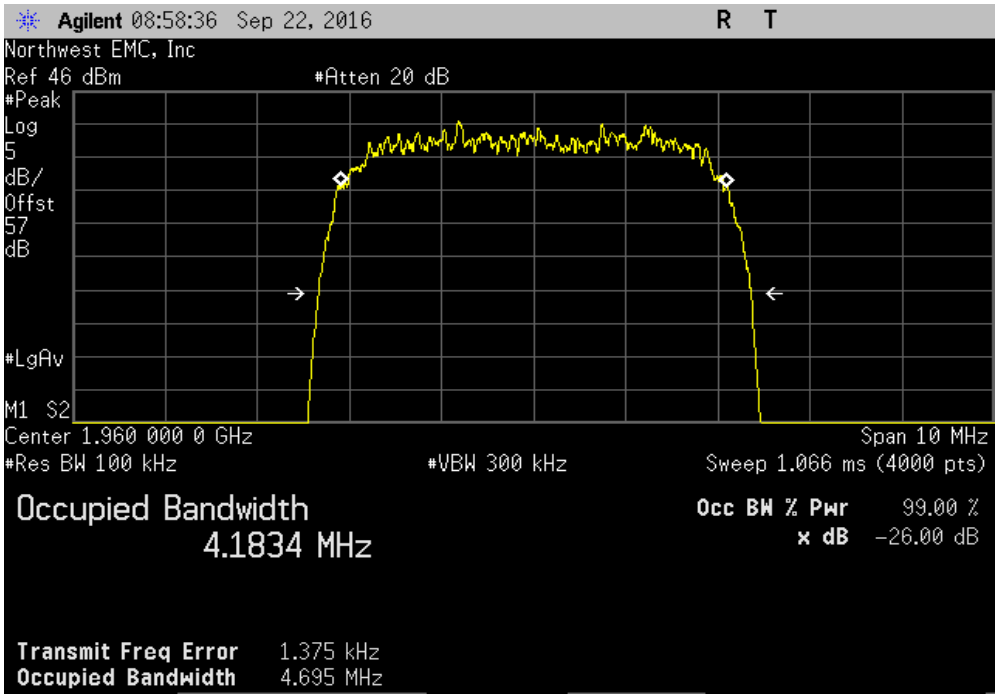
Antenna Port 1, Low Channel WCDMA, 1932.4 MHz

				Value	Limit	Result
				4.696 MHz	N/A	N/A



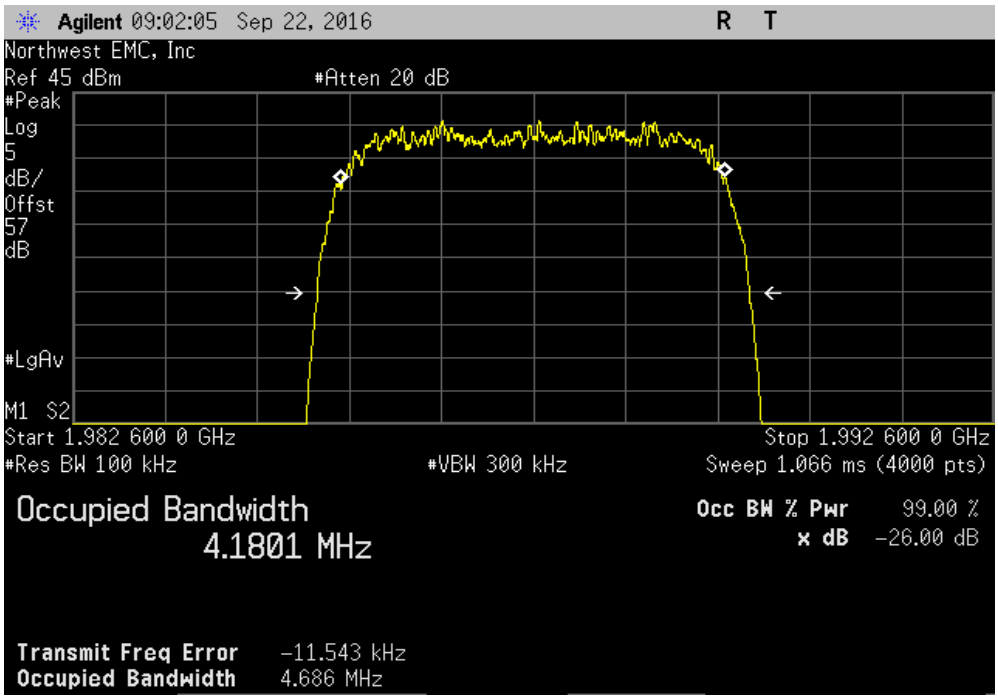
Antenna Port 1, Mid Channel WCDMA, 1960 MHz

				Value	Limit	Result
				4.695 MHz	N/A	N/A



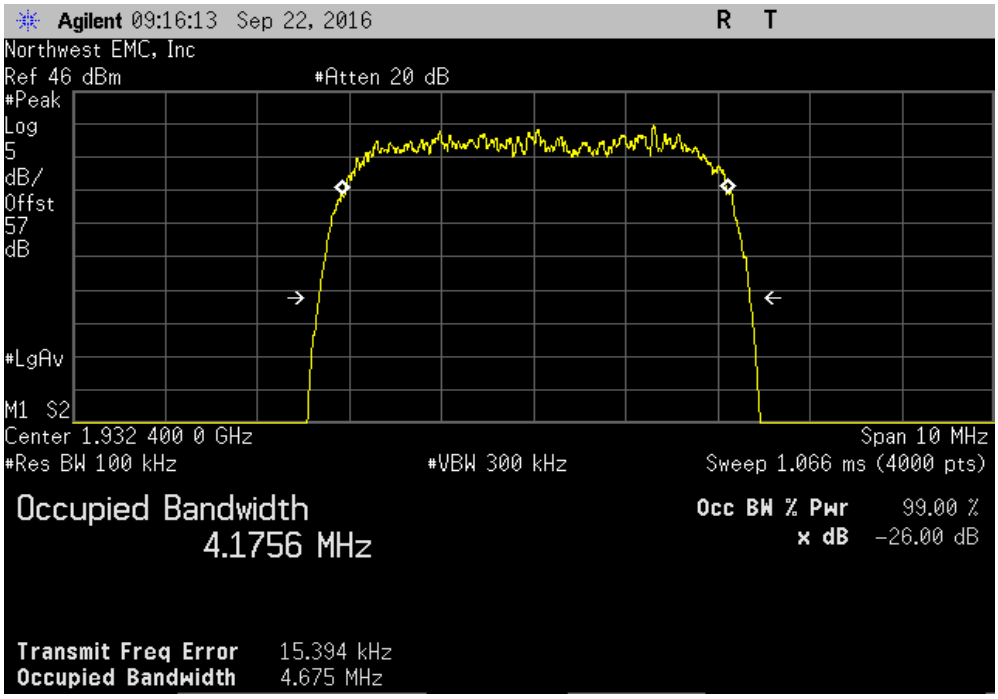
Antenna Port 1, High Channel WCDMA, 1987.6 MHz

				Value	Limit	Result
				4.686 MHz	N/A	N/A

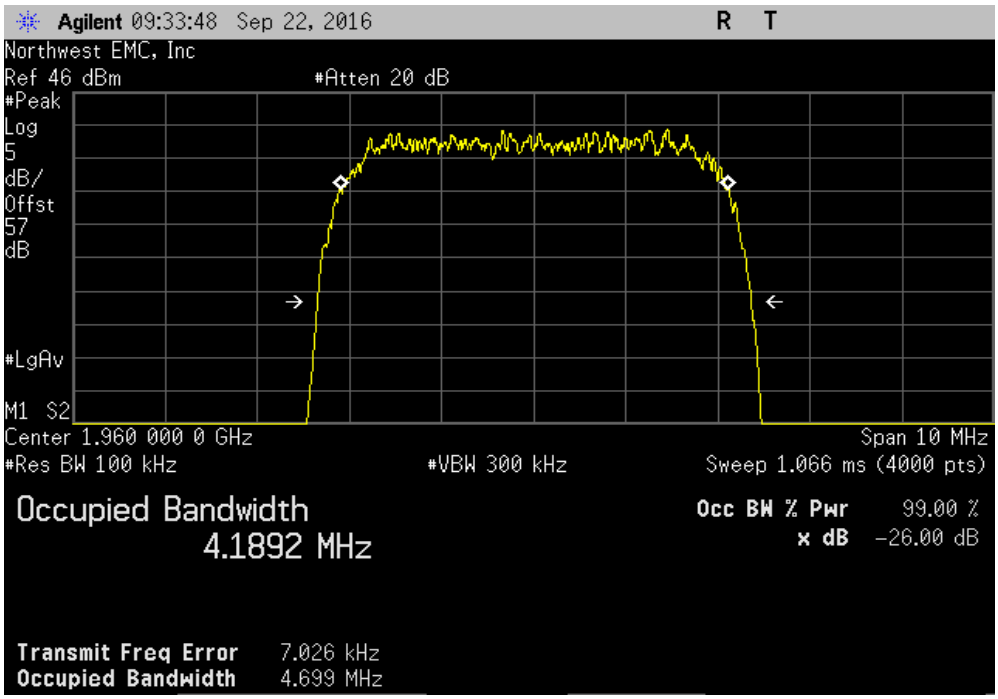


Antenna Port 2, Low Channel WCDMA, 1932.4 MHz

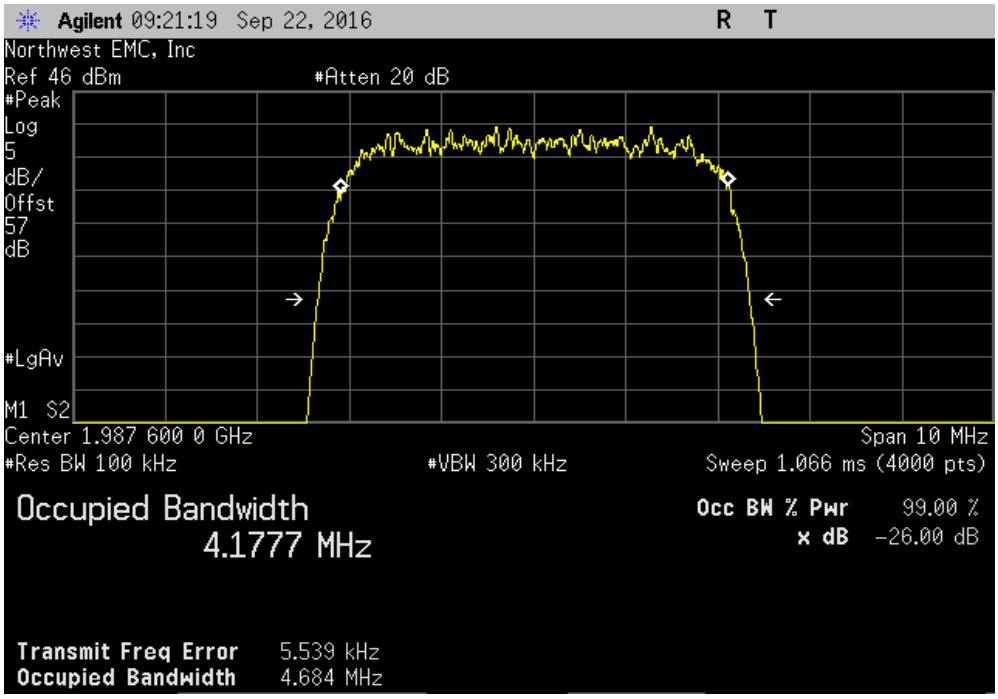
				Value	Limit	Result
				4.675 MHz	N/A	N/A



Antenna Port 2, Mid Channel WCDMA, 1960 MHz						
				Value	Limit	Result
				4.699 MHz	N/A	N/A



Antenna Port 2, High Channel WCDMA, 1987.6 MHz						
				Value	Limit	Result
				4.684 MHz	N/A	N/A



SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS - LTE BAND 2

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Filter - Band Pass/Notch	K&L Microwave	3TNF-1000/2000-N/N	HFS	11/3/2015	11/3/2016
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Analyzer plots utilizing appropriate resolution bandwidth (frequency dependant) and no video filtering were made for each mode listed in the datasheet.

The peak conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to the limit.

SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0073
Serial Number:	K163000003			**Date:**	08/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	22.4 °C
Attendees:	Andy Ku			**Humidity:**	50% RH
Project:	None			**Barometric Pres.:**	1015 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	**Test Method**
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total for low and high channels.
For mid channel a tunable notch filter was used to allow proper noise floor sensitivity, total offset including filter = 58.7dB for mid channel.

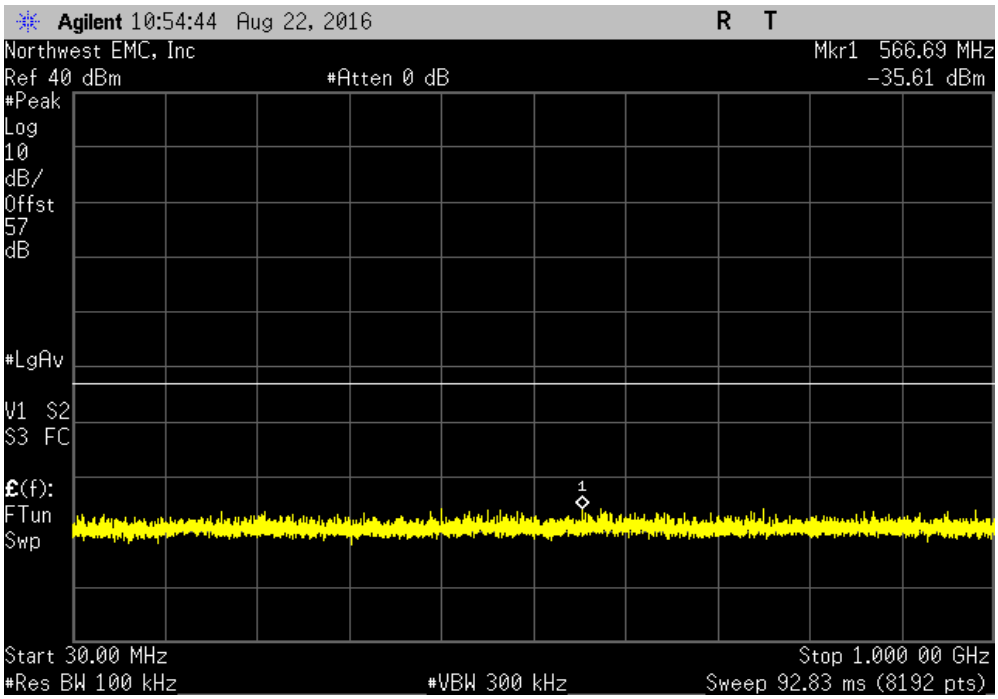
DEVIATIONS FROM TEST STANDARD

None

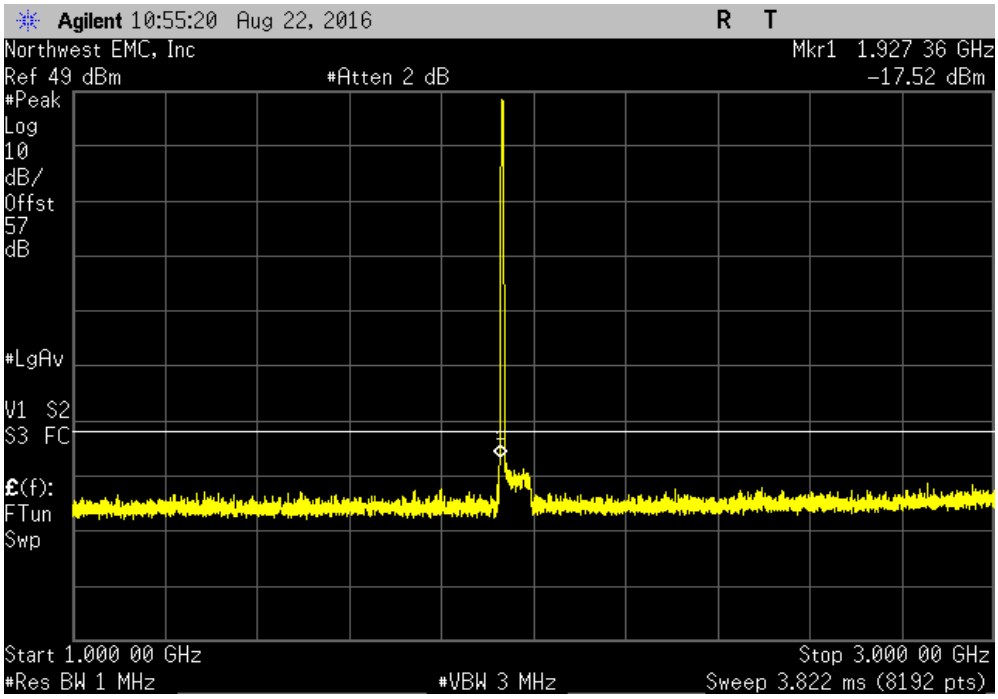
Configuration #	1	*Signature*

		Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result
Antenna Port 1					
	Low Channel LTE5, 1932.5 MHz	30 MHz - 1 GHz	-35.61	-13	Pass
	Low Channel LTE5, 1932.5 MHz	1 GHz - 3 GHz	-17.52	-13	Pass
	Low Channel LTE5, 1932.5 MHz	3 GHz - 20 GHz	-19.47	-13	Pass
	Mid Channel LTE5, 1960 MHz	30 MHz - 1 GHz	-33.83	-13	Pass
	Mid Channel LTE5, 1960 MHz	1 GHz - 3 GHz	-20.46	-13	Pass
	Mid Channel LTE5, 1960 MHz	3 GHz - 20 GHz	-17.74	-13	Pass
	High Channel LTE5, 1987.5 MHz	30 MHz - 1 GHz	-35.31	-13	Pass
	High Channel LTE5, 1987.5 MHz	1 GHz - 3 GHz	-21.28	-13	Pass
	High Channel LTE5, 1987.5 MHz	3 GHz - 20 GHz	-19.74	-13	Pass
	Low Channel LTE10, 1935 MHz	30 MHz - 1 GHz	-35.89	-13	Pass
	Low Channel LTE10, 1935 MHz	1 GHz - 3 GHz	-19.21	-13	Pass
	Low Channel LTE10, 1935 MHz	3 GHz - 20 GHz	-19.46	-13	Pass
	Mid Channel LTE10, 1960 MHz	30 MHz - 1 GHz	-34.06	-13	Pass
	Mid Channel LTE10, 1960 MHz	1 GHz - 3 GHz	-20.06	-13	Pass
	Mid Channel LTE10, 1960 MHz	3 GHz - 20 GHz	-17.52	-13	Pass
	High Channel LTE10, 1985 MHz	30 MHz - 1 GHz	-35.72	-13	Pass
	High Channel LTE10, 1985 MHz	1 GHz - 3 GHz	-22.45	-13	Pass
	High Channel LTE10, 1985 MHz	3 GHz - 20 GHz	-19.09	-13	Pass
	Low Channel LTE20, 1940 MHz	30 MHz - 1 GHz	-35.50	-13	Pass
	Low Channel LTE20, 1940 MHz	1 GHz - 3 GHz	-18.97	-13	Pass
	Low Channel LTE20, 1940 MHz	3 GHz - 20 GHz	-19.70	-13	Pass
	Mid Channel LTE20, 1960 MHz	30 MHz - 1 GHz	-33.28	-13	Pass
	Mid Channel LTE20, 1960 MHz	1 GHz - 3 GHz	-19.95	-13	Pass
	Mid Channel LTE20, 1960 MHz	3 GHz - 20 GHz	-17.12	-13	Pass
	High Channel LTE20, 1980 MHz	30 MHz - 1 GHz	-35.90	-13	Pass
	High Channel LTE20, 1980 MHz	1 GHz - 3 GHz	-22.40	-13	Pass
	High Channel LTE20, 1980 MHz	3 GHz - 20 GHz	-19.36	-13	Pass
Antenna Port 2					
	Low Channel LTE5, 1932.5 MHz	30 MHz - 1 GHz	-35.47	-13	Pass
	Low Channel LTE5, 1932.5 MHz	1 GHz - 3 GHz	-18.69	-13	Pass
	Low Channel LTE5, 1932.5 MHz	3 GHz - 20 GHz	-19.39	-13	Pass
	Mid Channel LTE5, 1960 MHz	30 MHz - 1 GHz	-34.17	-13	Pass
	Mid Channel LTE5, 1960 MHz	1 GHz - 3 GHz	-20.48	-13	Pass
	Mid Channel LTE5, 1960 MHz	3 GHz - 20 GHz	-17.98	-13	Pass
	High Channel LTE5, 1987.5 MHz	30 MHz - 1 GHz	-35.73	-13	Pass
	High Channel LTE5, 1987.5 MHz	1 GHz - 3 GHz	-19.64	-13	Pass
	High Channel LTE5, 1987.5 MHz	3 GHz - 20 GHz	-19.79	-13	Pass
	Low Channel LTE10, 1935 MHz	30 MHz - 1 GHz	-36.04	-13	Pass
	Low Channel LTE10, 1935 MHz	1 GHz - 3 GHz	-18.49	-13	Pass
	Low Channel LTE10, 1935 MHz	3 GHz - 20 GHz	-18.54	-13	Pass
	Mid Channel LTE10, 1960 MHz	30 MHz - 1 GHz	-33.73	-13	Pass
	Mid Channel LTE10, 1960 MHz	1 GHz - 3 GHz	-20.46	-13	Pass
	Mid Channel LTE10, 1960 MHz	3 GHz - 20 GHz	-17.75	-13	Pass
	High Channel LTE10, 1985 MHz	30 MHz - 1 GHz	-35.62	-13	Pass
	High Channel LTE10, 1985 MHz	1 GHz - 3 GHz	-22.96	-13	Pass
	High Channel LTE10, 1985 MHz	3 GHz - 20 GHz	-19.54	-13	Pass
	Low Channel LTE20, 1940 MHz	30 MHz - 1 GHz	-35.23	-13	Pass
	Low Channel LTE20, 1940 MHz	1 GHz - 3 GHz	-17.09	-13	Pass
	Low Channel LTE20, 1940 MHz	3 GHz - 20 GHz	-19.20	-13	Pass
	Mid Channel LTE20, 1960 MHz	30 MHz - 1 GHz	-34.25	-13	Pass
	Mid Channel LTE20, 1960 MHz	1 GHz - 3 GHz	-17.83	-13	Pass
	Mid Channel LTE20, 1960 MHz	3 GHz - 20 GHz	-18.05	-13	Pass
	High Channel LTE20, 1980 MHz	30 MHz - 1 GHz	-35.26	-13	Pass
	High Channel LTE20, 1980 MHz	1 GHz - 3 GHz	-22.77	-13	Pass
	High Channel LTE20, 1980 MHz	3 GHz - 20 GHz	-19.36	-13	Pass

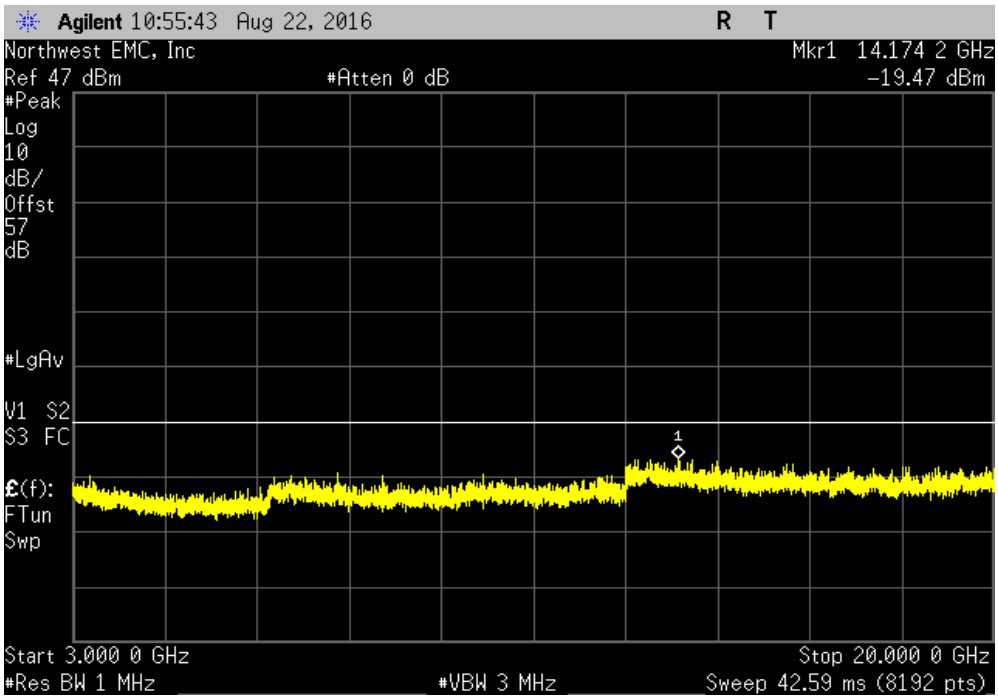
Antenna Port 1, Low Channel LTE5, 1932.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.61	-13	Pass



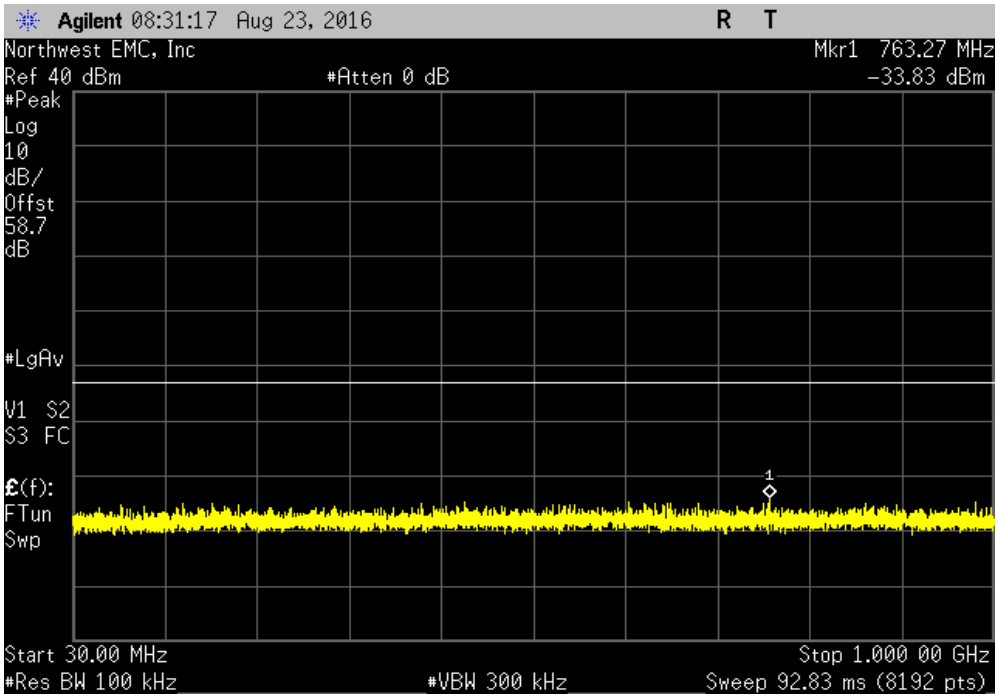
Antenna Port 1, Low Channel LTE5, 1932.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-17.52	-13	Pass



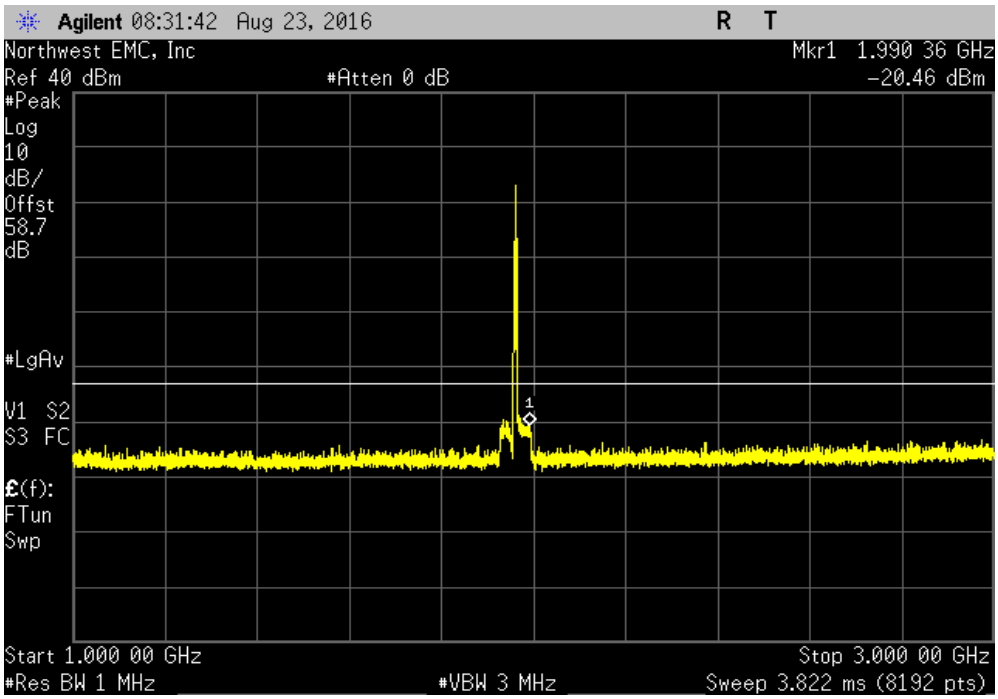
Antenna Port 1, Low Channel LTE5, 1932.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.47	-13	Pass



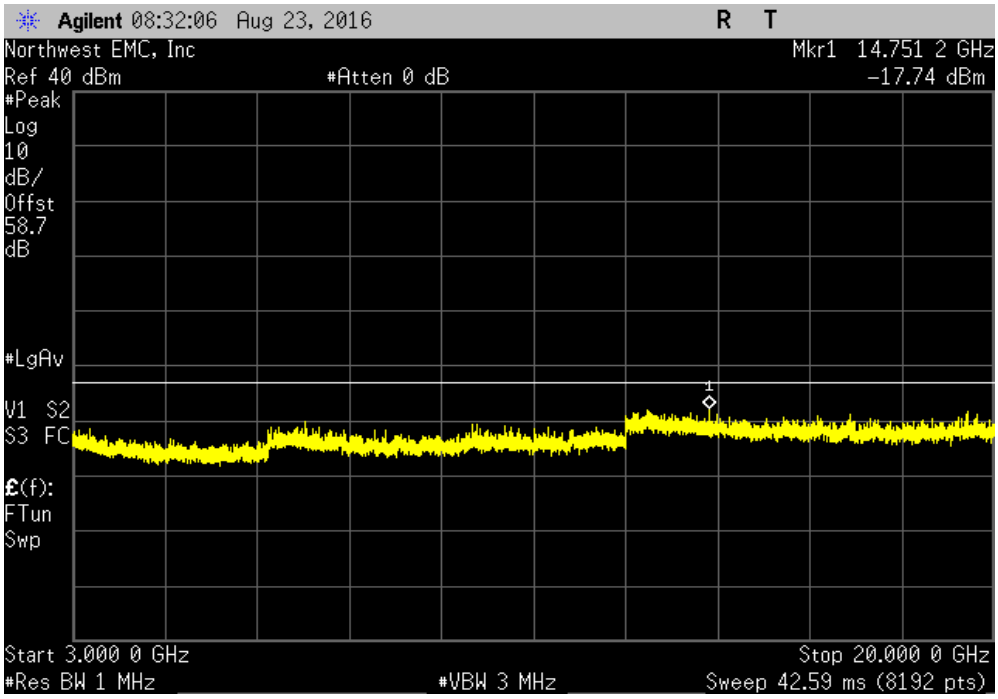
Antenna Port 1, Mid Channel LTE5, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.83	-13	Pass



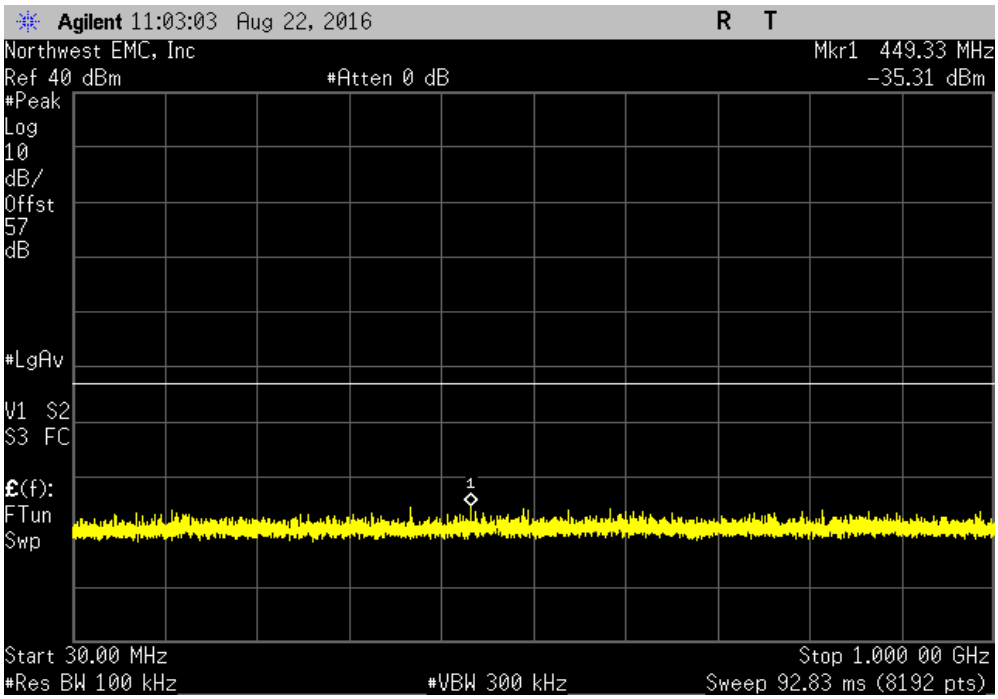
Antenna Port 1, Mid Channel LTE5, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.46	-13	Pass



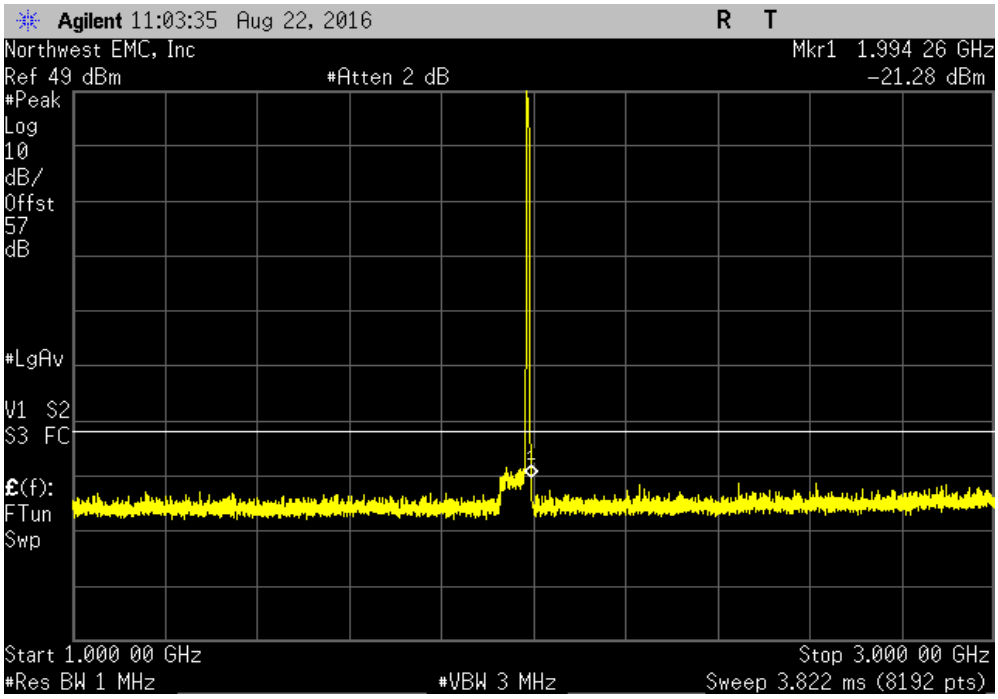
Antenna Port 1, Mid Channel LTE5, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-17.74	-13	Pass



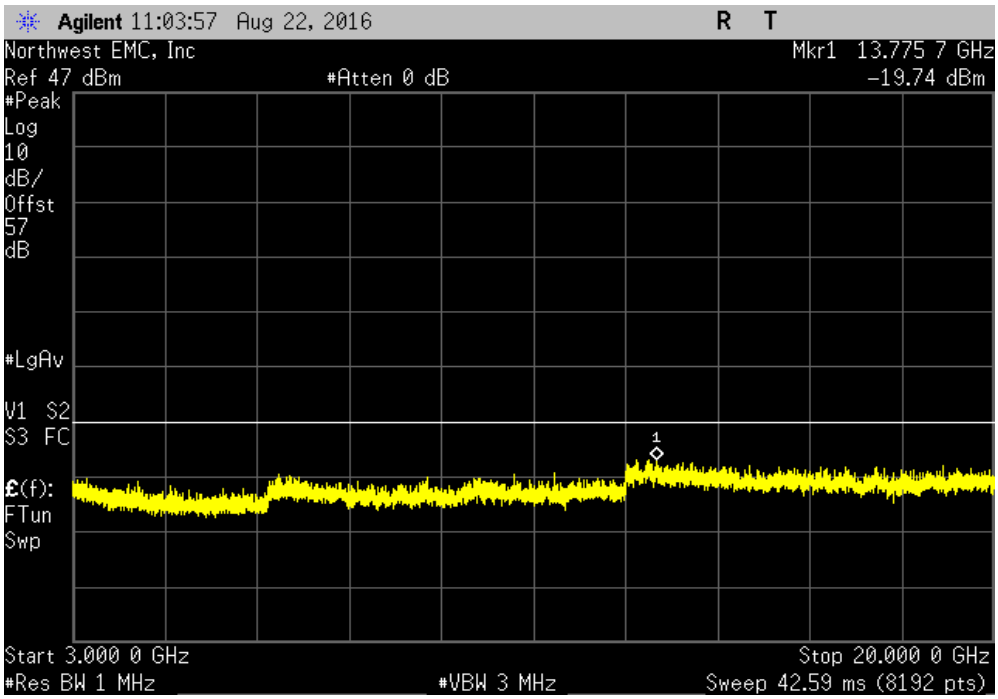
Antenna Port 1, High Channel LTE5, 1987.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.31	-13	Pass



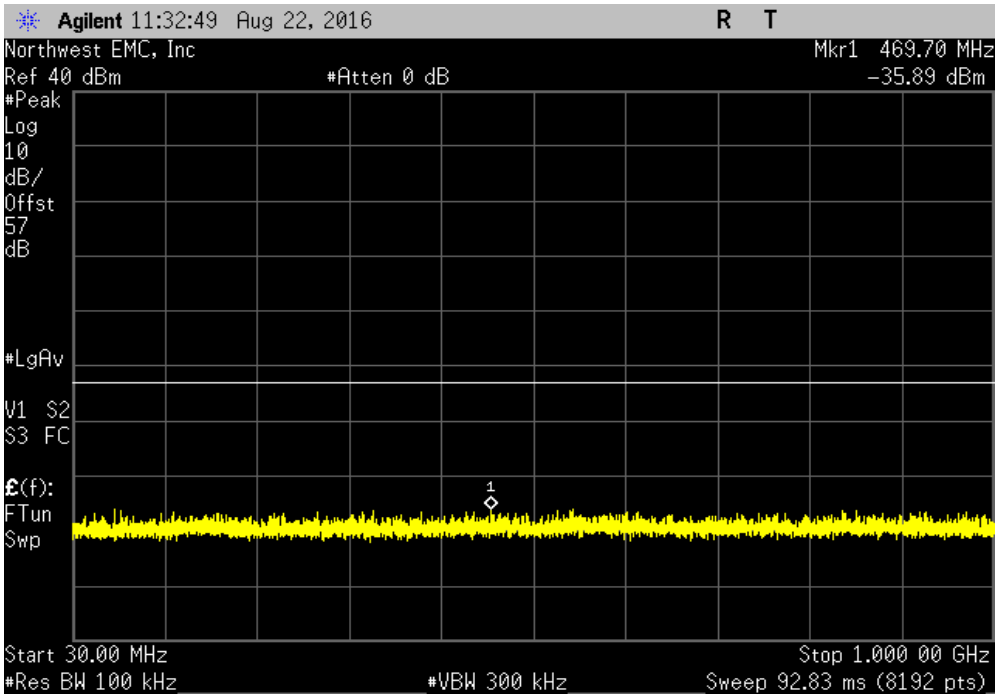
Antenna Port 1, High Channel LTE5, 1987.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.28	-13	Pass



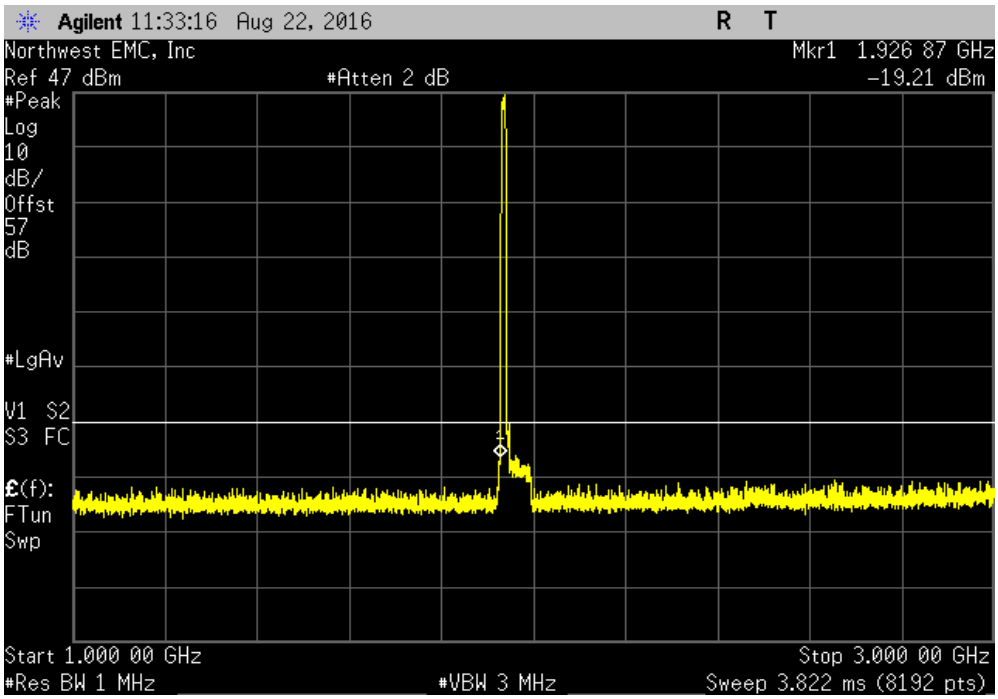
Antenna Port 1, High Channel LTE5, 1987.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.74	-13	Pass



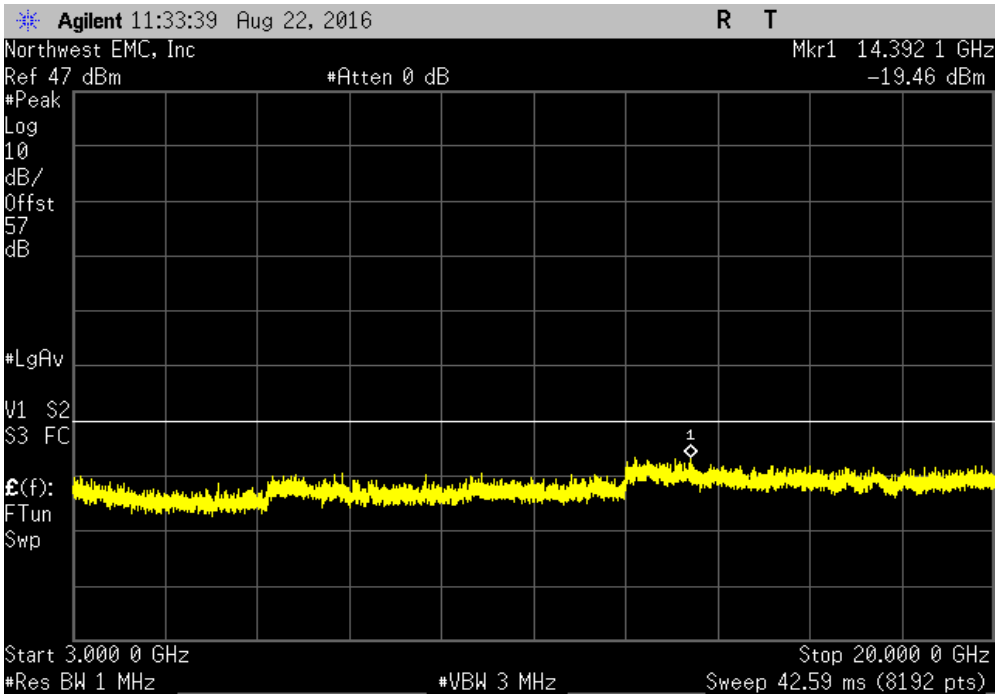
Antenna Port 1, Low Channel LTE10, 1935 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.89	-13	Pass



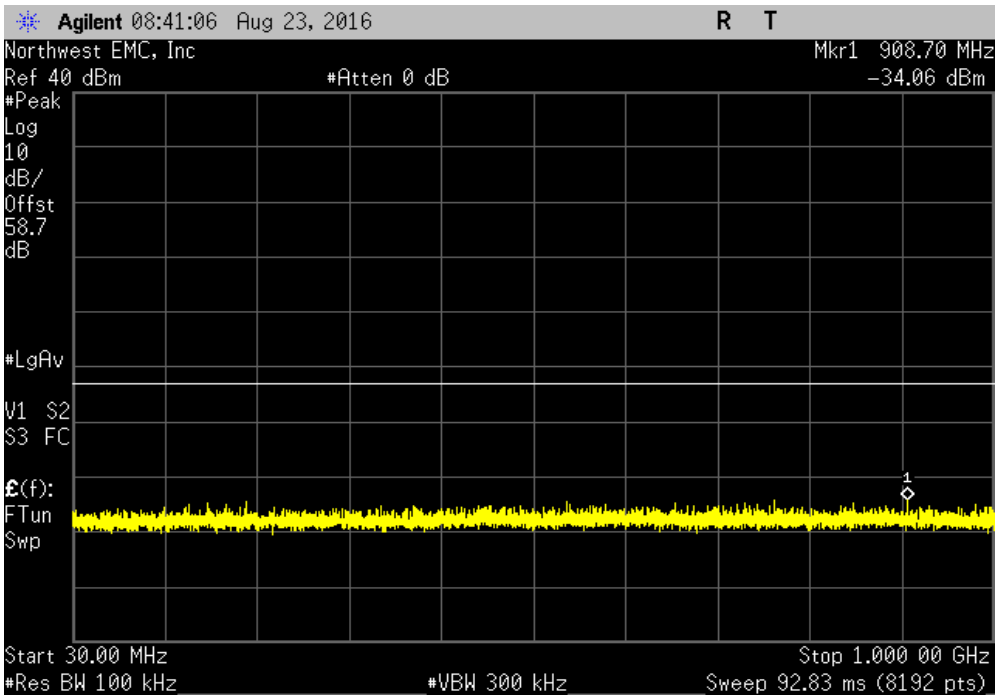
Antenna Port 1, Low Channel LTE10, 1935 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.21	-13	Pass



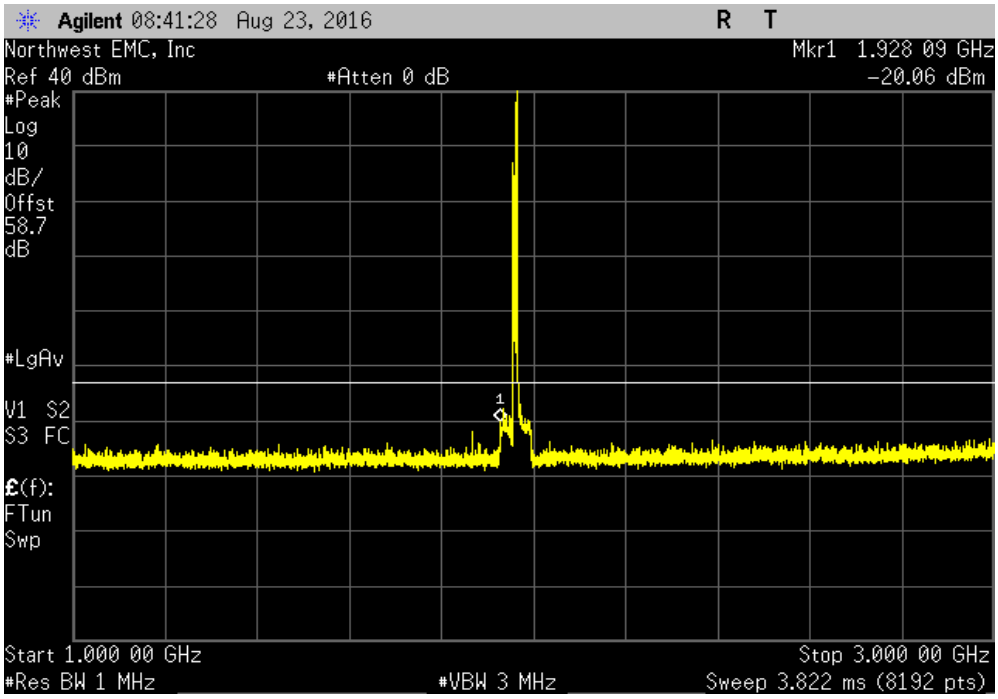
Antenna Port 1, Low Channel LTE10, 1935 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.46	-13	Pass



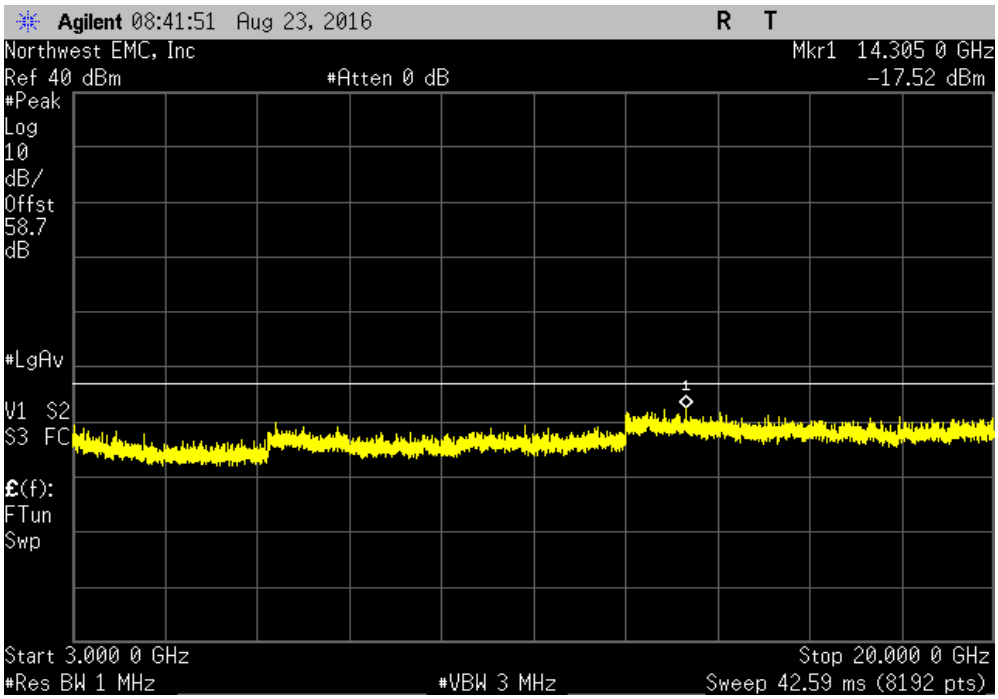
Antenna Port 1, Mid Channel LTE10, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.06	-13	Pass



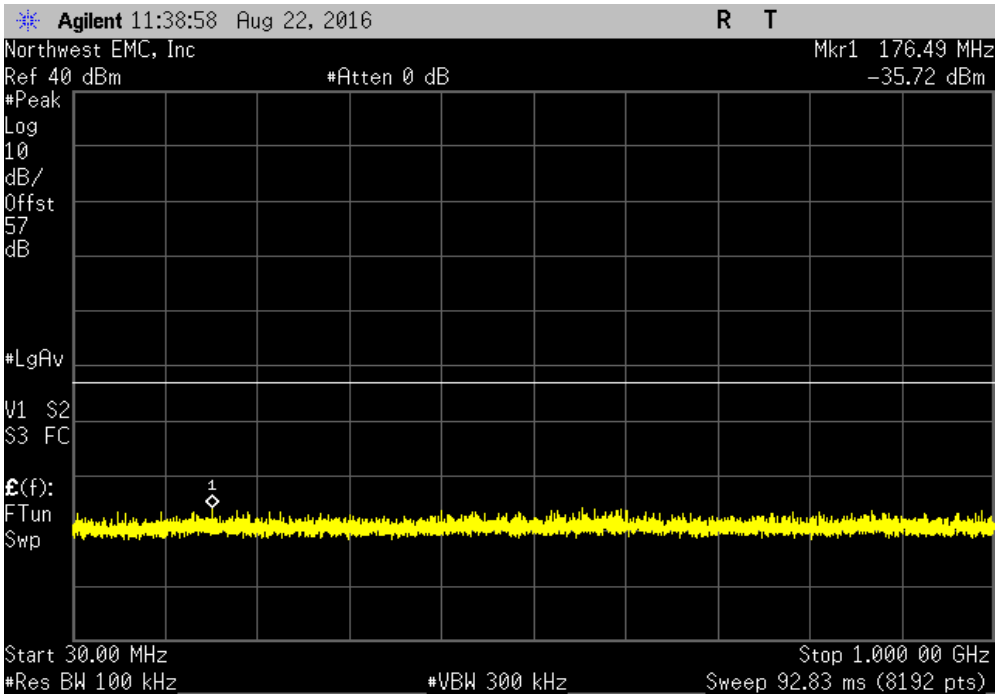
Antenna Port 1, Mid Channel LTE10, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.06	-13	Pass



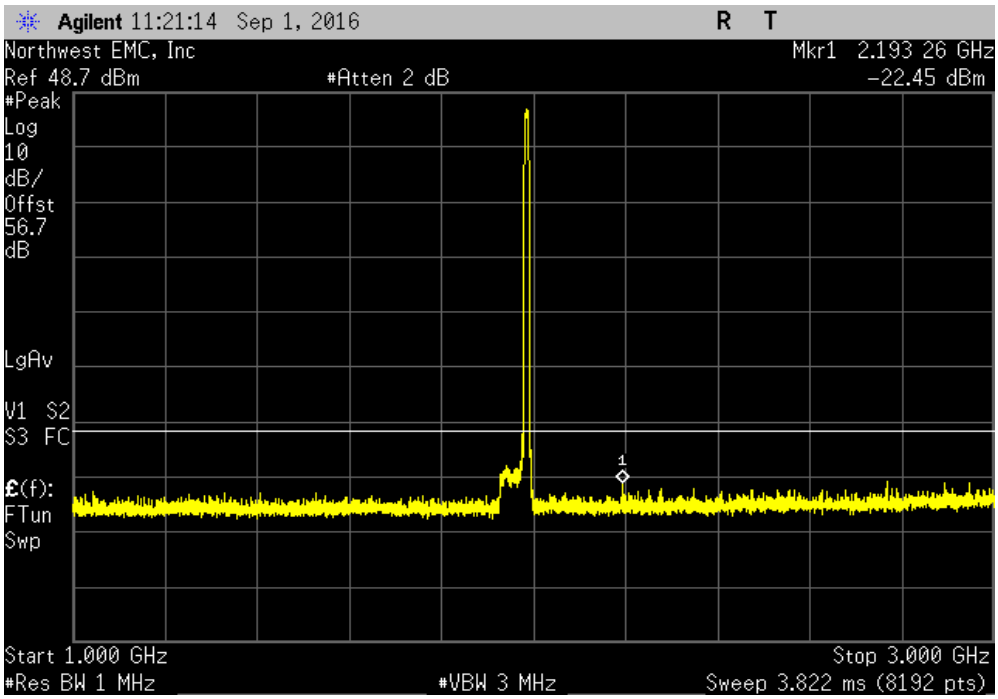
Antenna Port 1, Mid Channel LTE10, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-17.52	-13	Pass



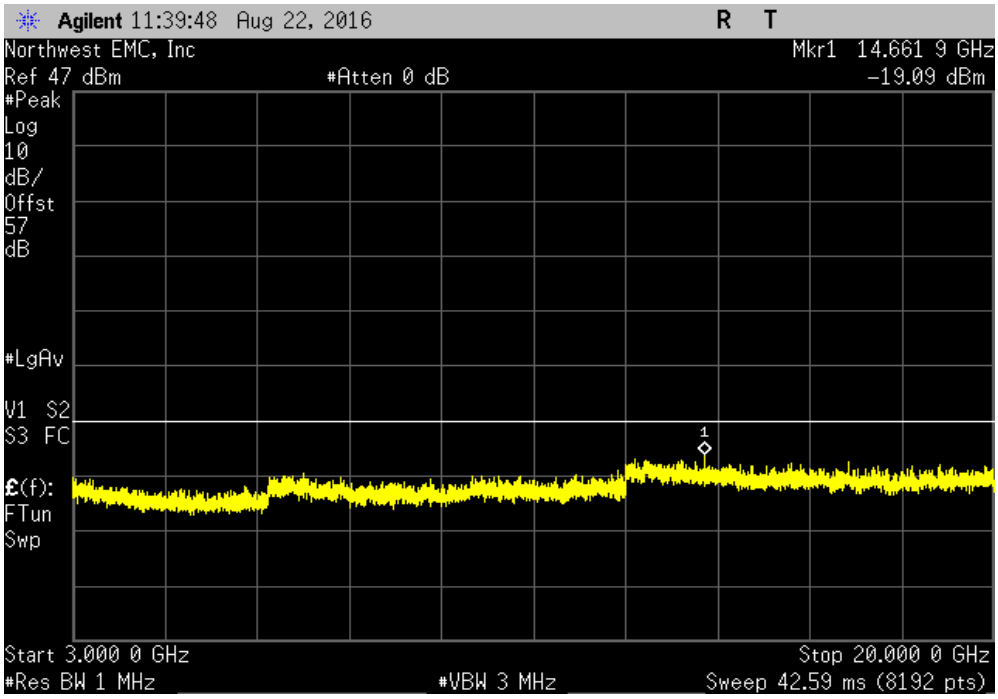
Antenna Port 1, High Channel LTE10, 1985 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.72	-13	Pass



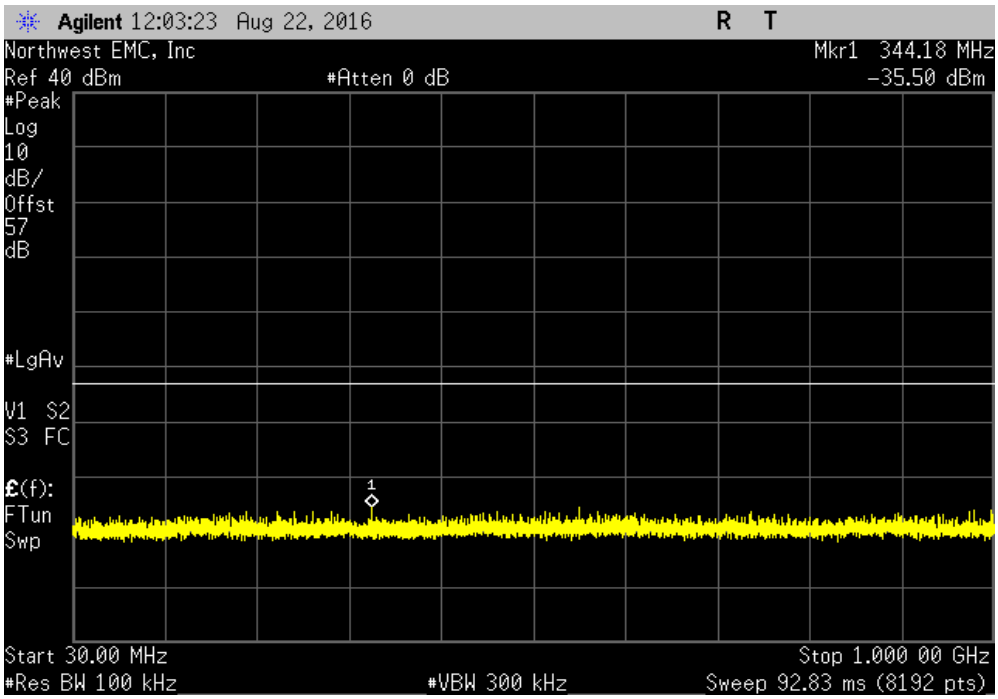
Antenna Port 1, High Channel LTE10, 1985 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.45	-13	Pass



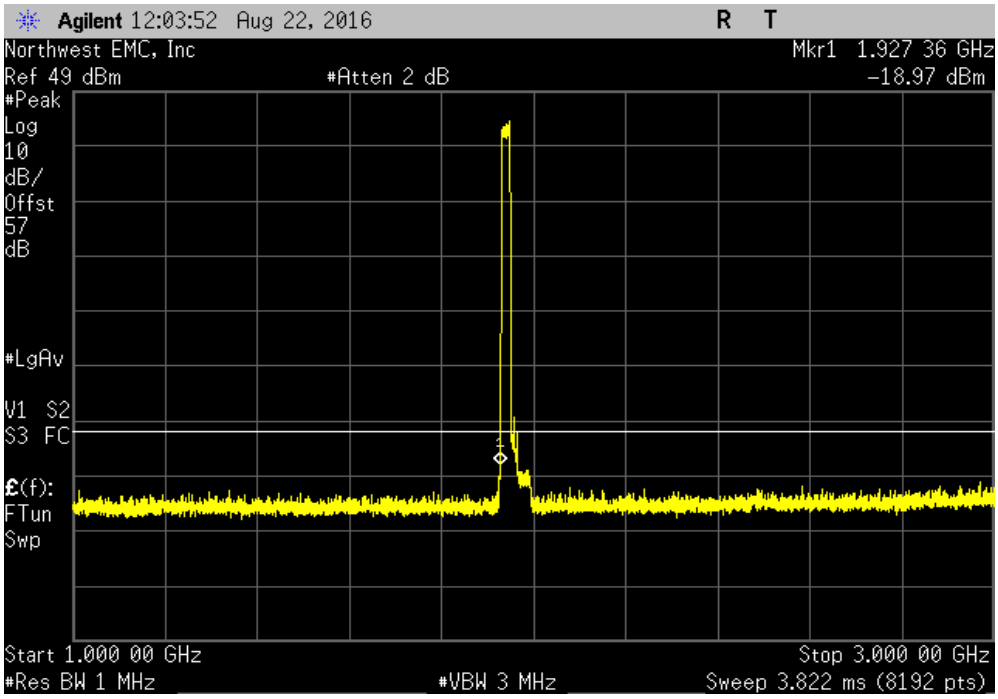
Antenna Port 1, High Channel LTE10, 1985 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.09	-13	Pass



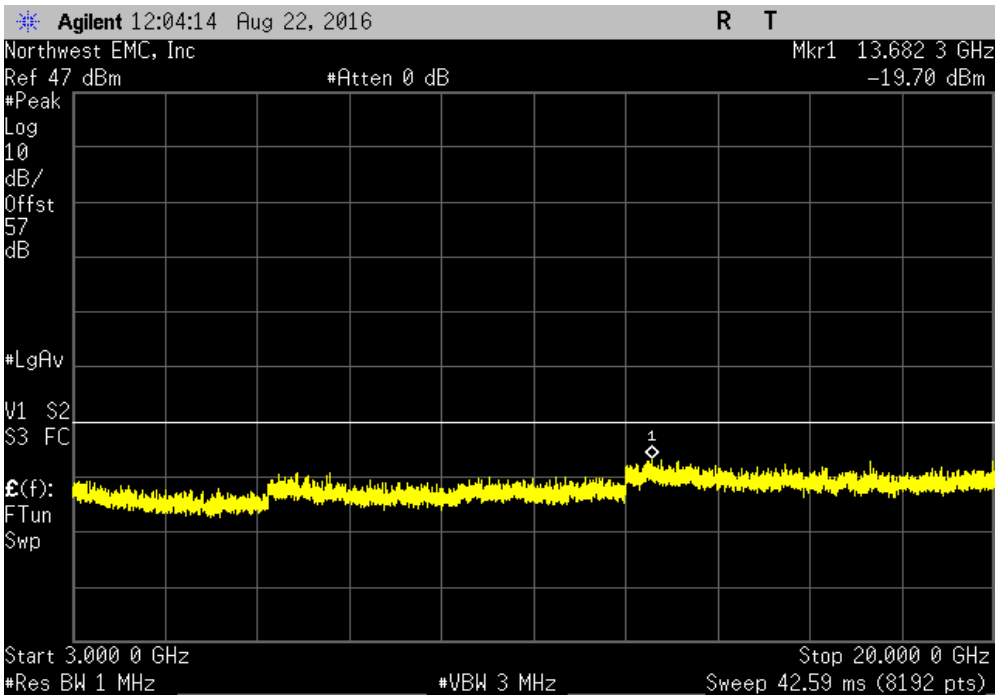
Antenna Port 1, Low Channel LTE20, 1940 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.50	-13	Pass



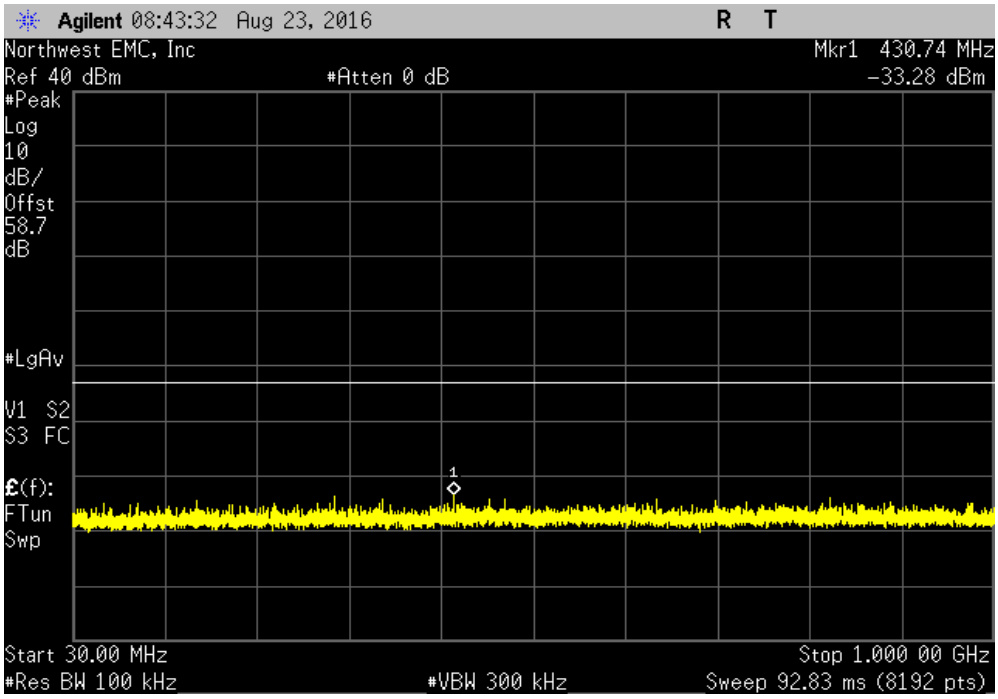
Antenna Port 1, Low Channel LTE20, 1940 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-18.97	-13	Pass



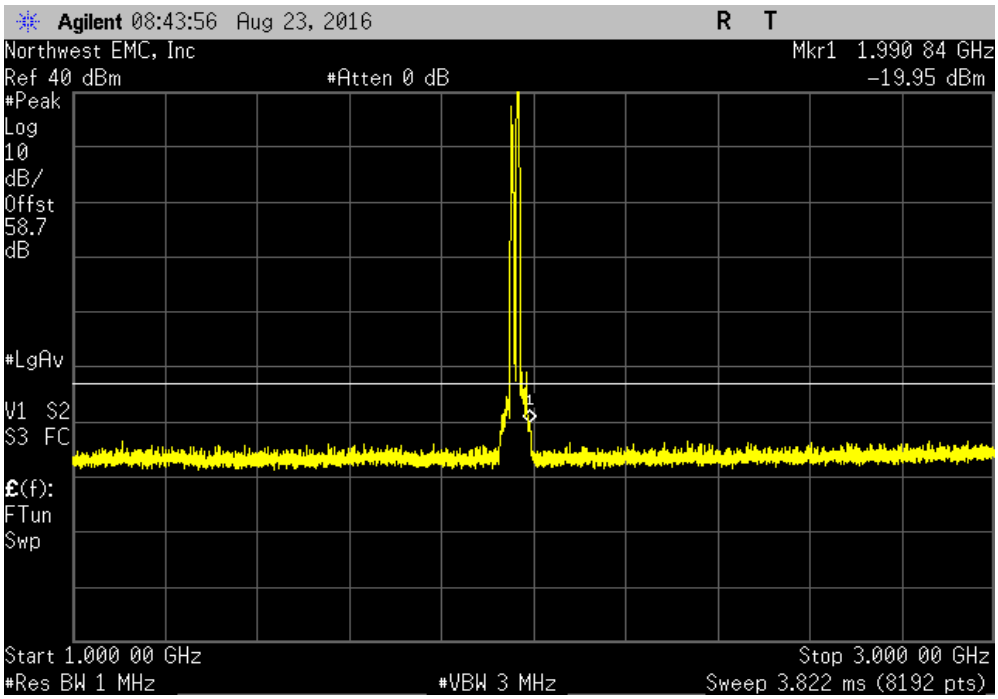
Antenna Port 1, Low Channel LTE20, 1940 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.70	-13	Pass



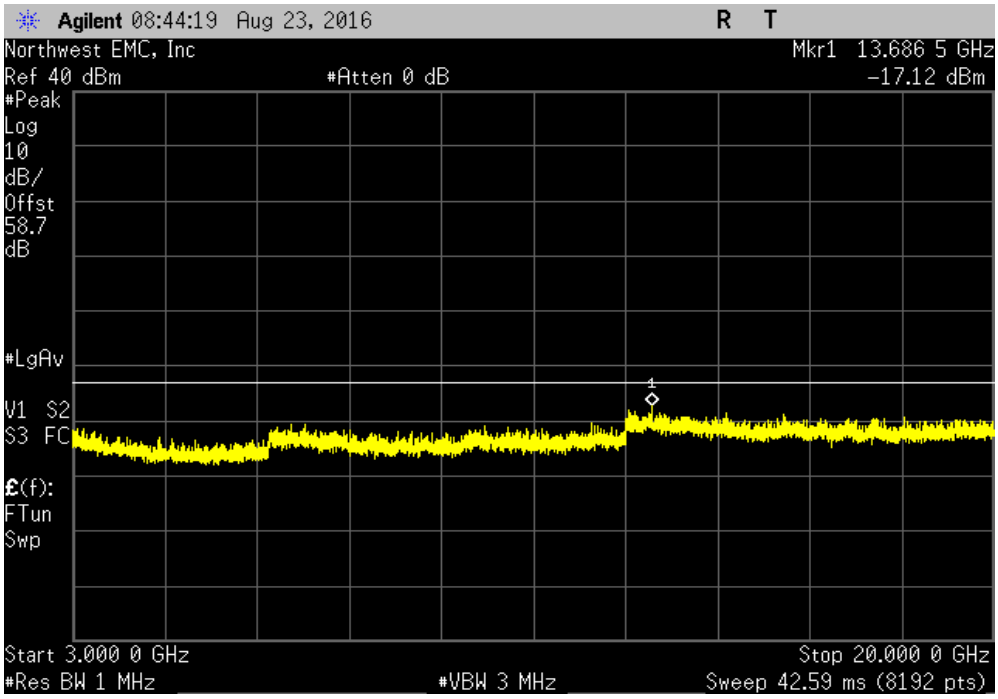
Antenna Port 1, Mid Channel LTE20, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.28	-13	Pass



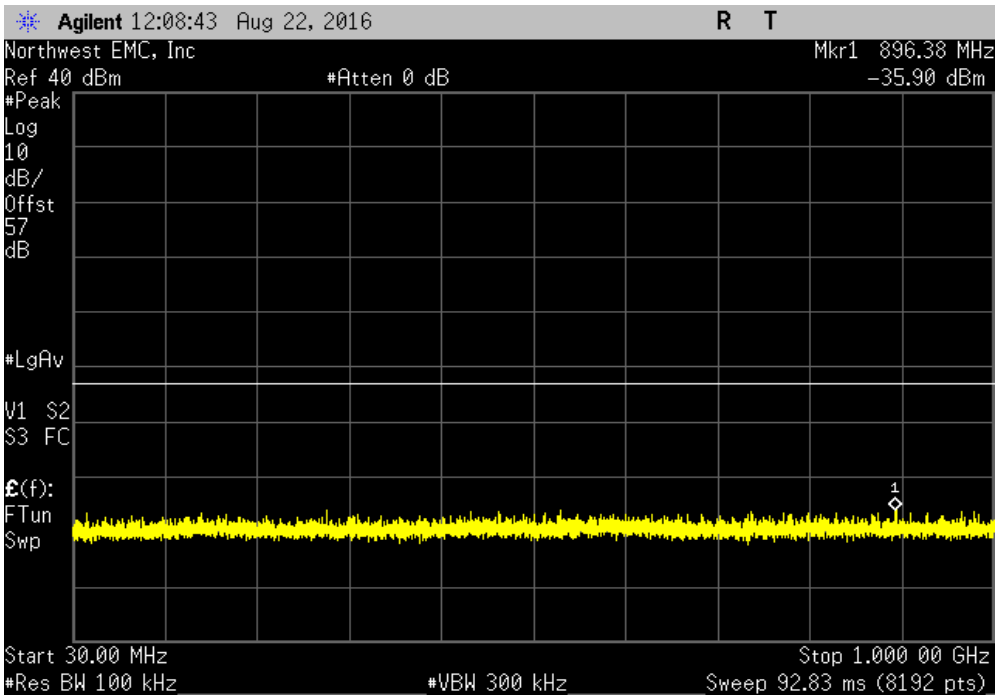
Antenna Port 1, Mid Channel LTE20, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.95	-13	Pass



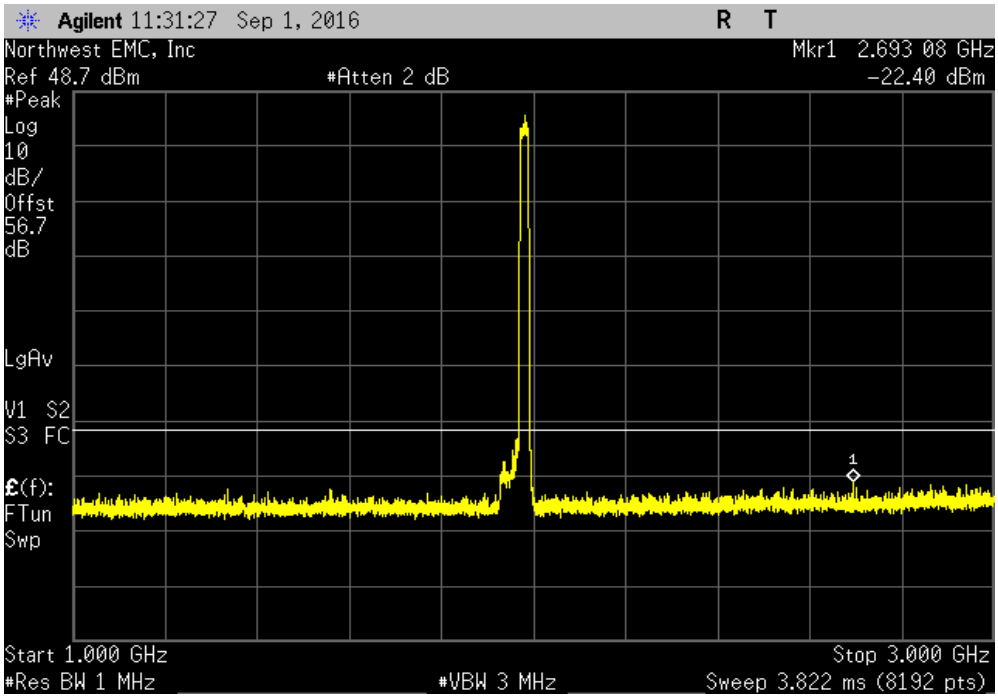
Antenna Port 1, Mid Channel LTE20, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-17.12	-13	Pass



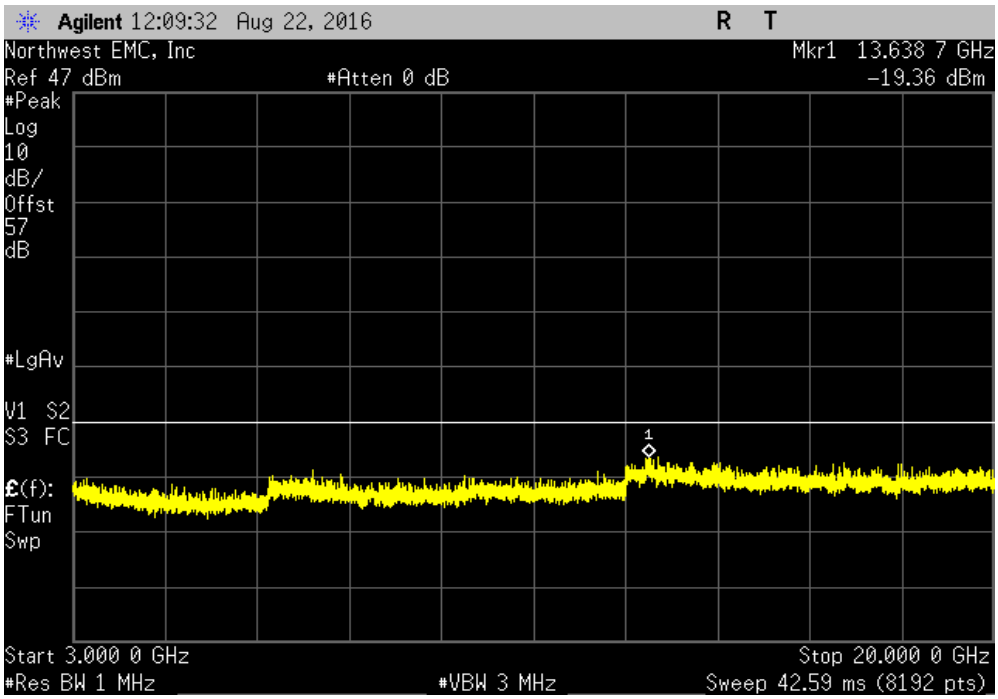
Antenna Port 1, High Channel LTE20, 1980 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.90	-13	Pass



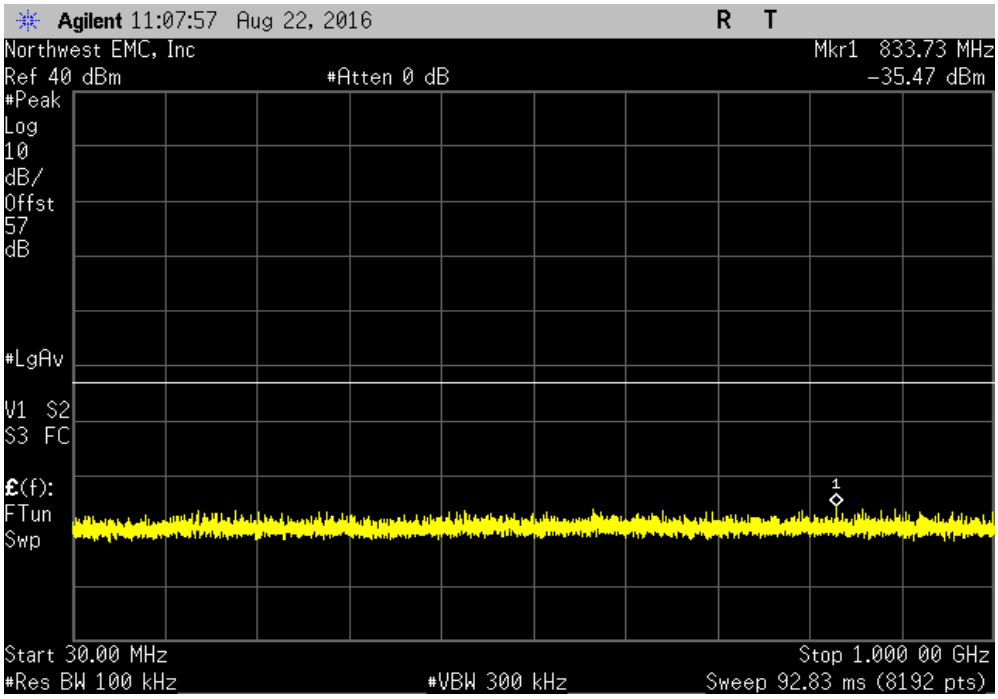
Antenna Port 1, High Channel LTE20, 1980 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.40	-13	Pass



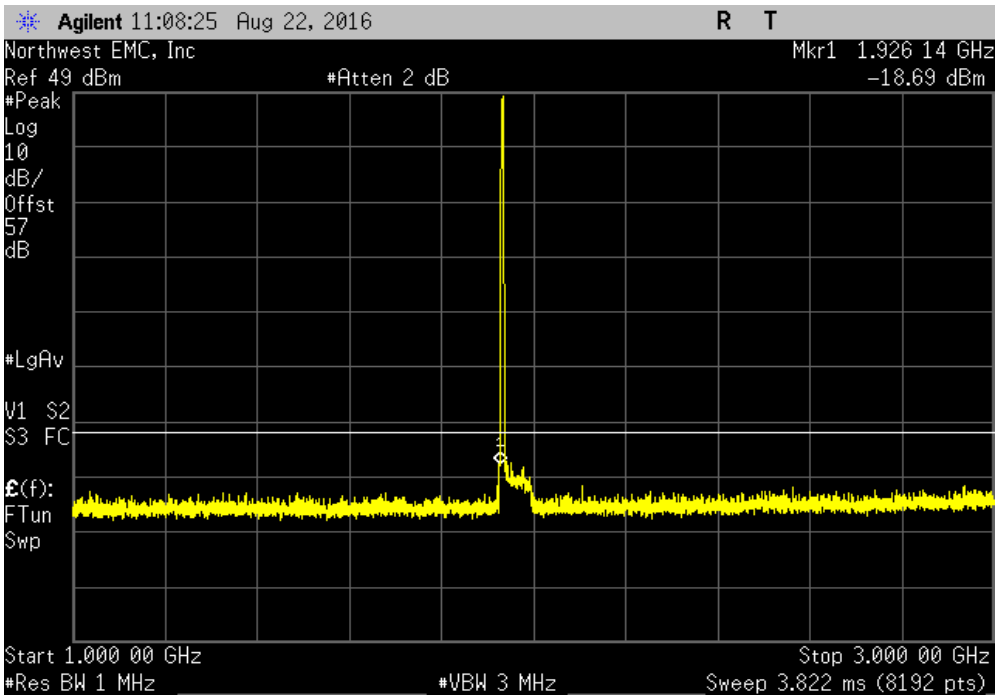
Antenna Port 1, High Channel LTE20, 1980 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.36	-13	Pass



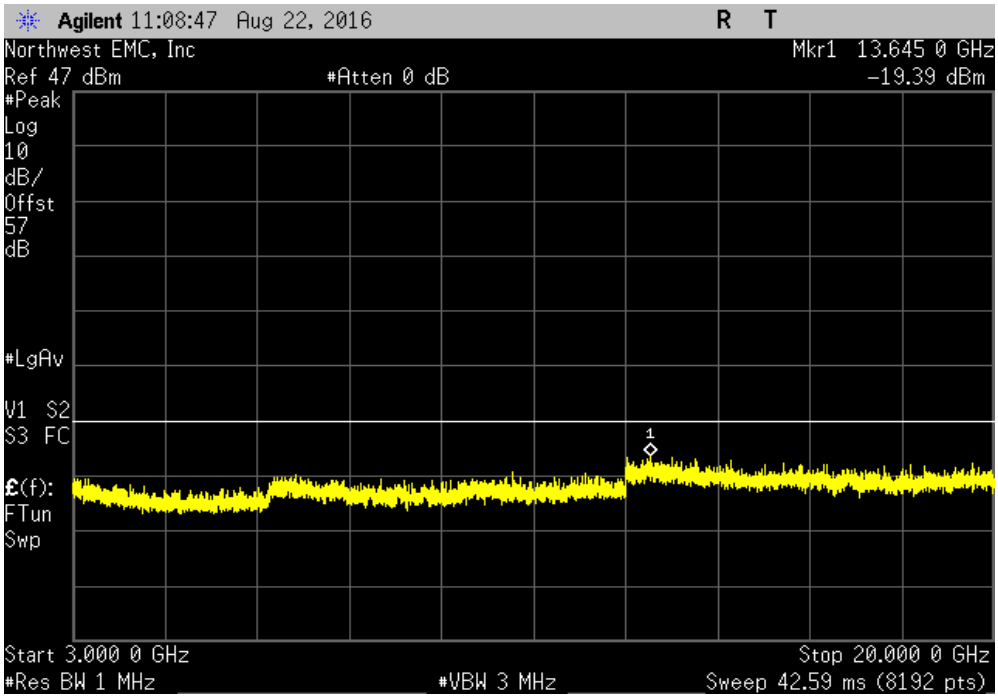
Antenna Port 2, Low Channel LTE5, 1932.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.47	-13	Pass



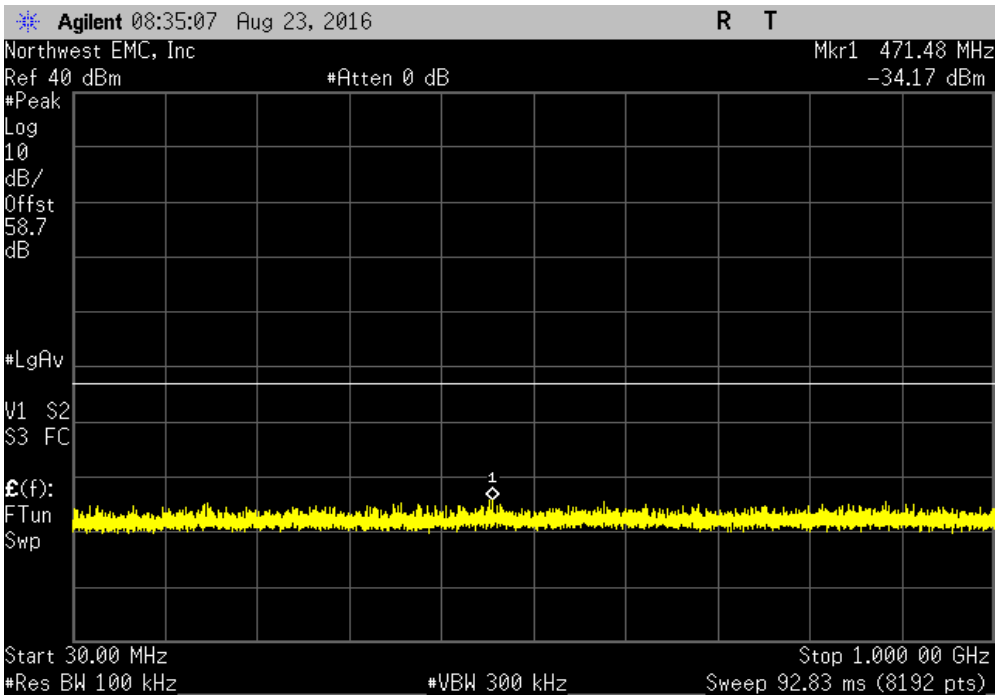
Antenna Port 2, Low Channel LTE5, 1932.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-18.69	-13	Pass



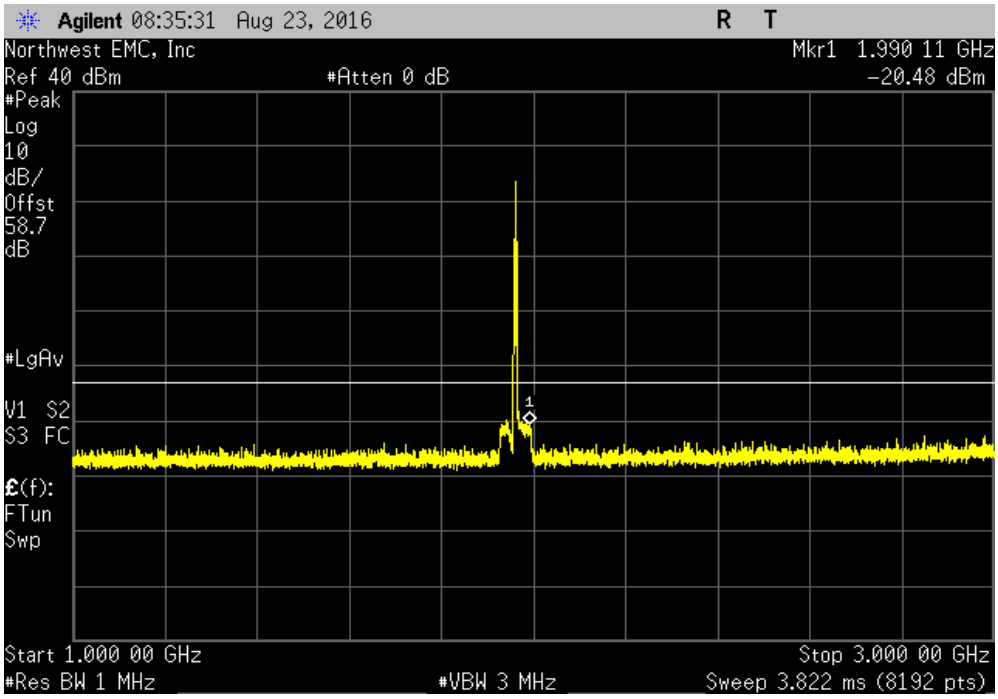
Antenna Port 2, Low Channel LTE5, 1932.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.39	-13	Pass



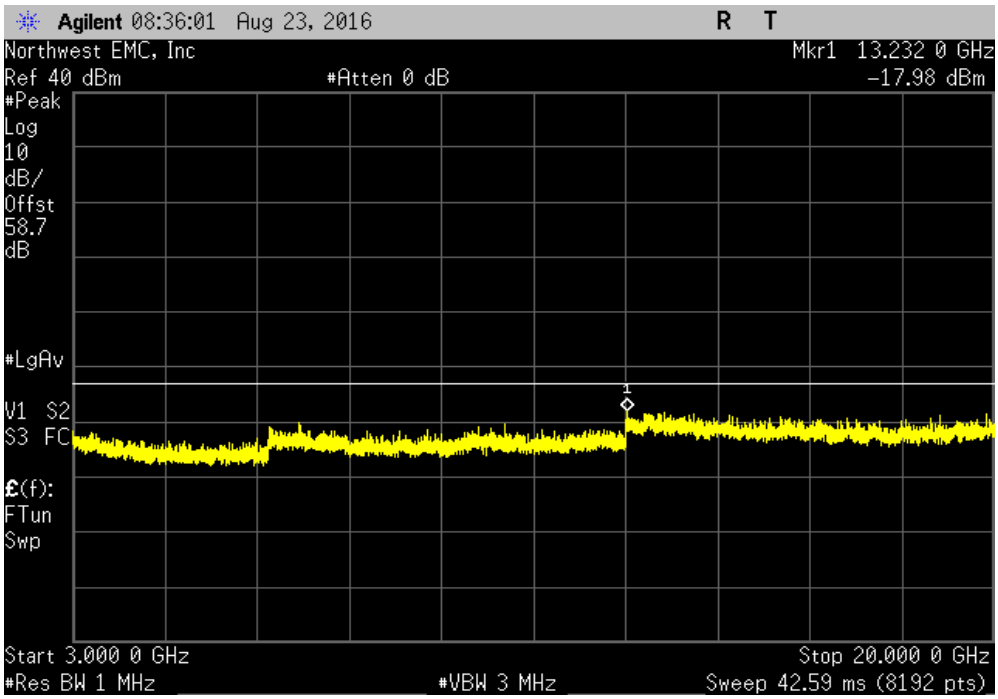
Antenna Port 2, Mid Channel LTE5, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.17	-13	Pass



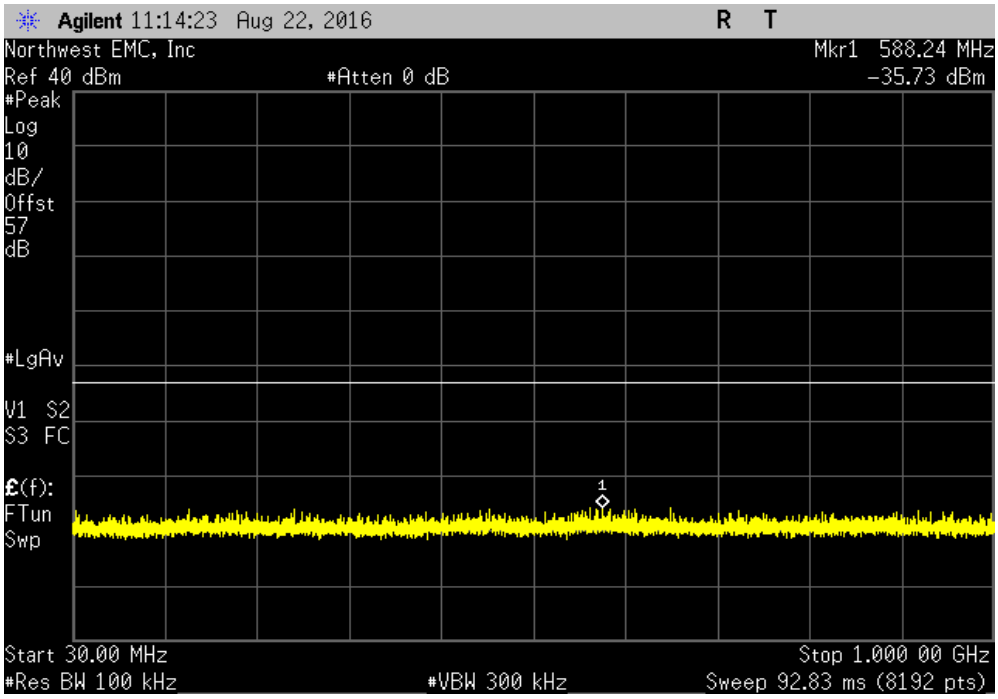
Antenna Port 2, Mid Channel LTE5, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.48	-13	Pass



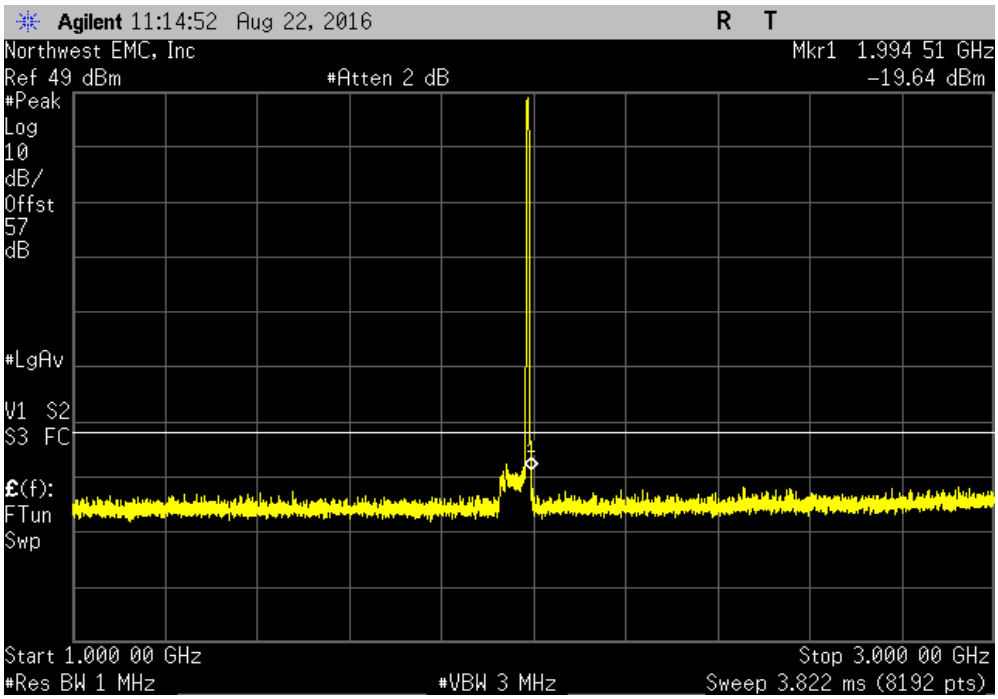
Antenna Port 2, Mid Channel LTE5, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-17.98	-13	Pass



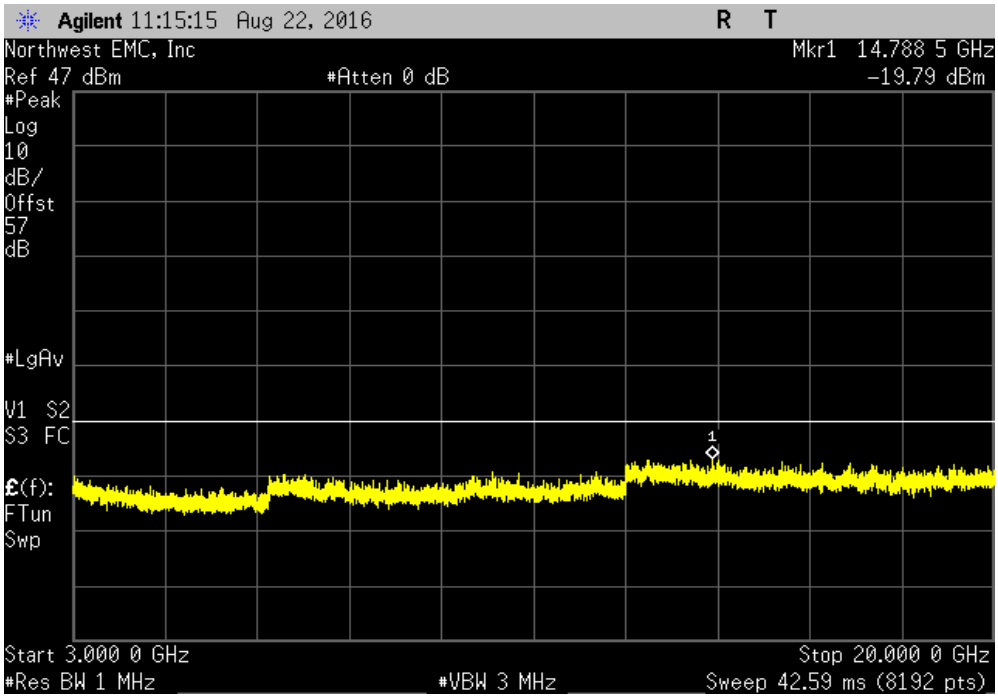
Antenna Port 2, High Channel LTE5, 1987.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.73	-13	Pass



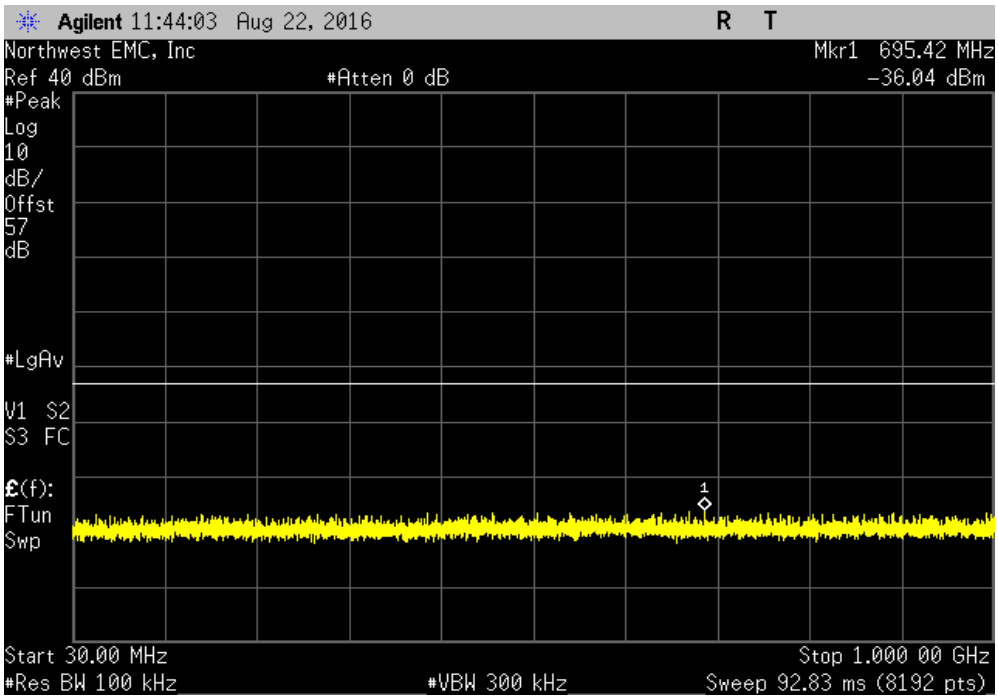
Antenna Port 2, High Channel LTE5, 1987.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.64	-13	Pass



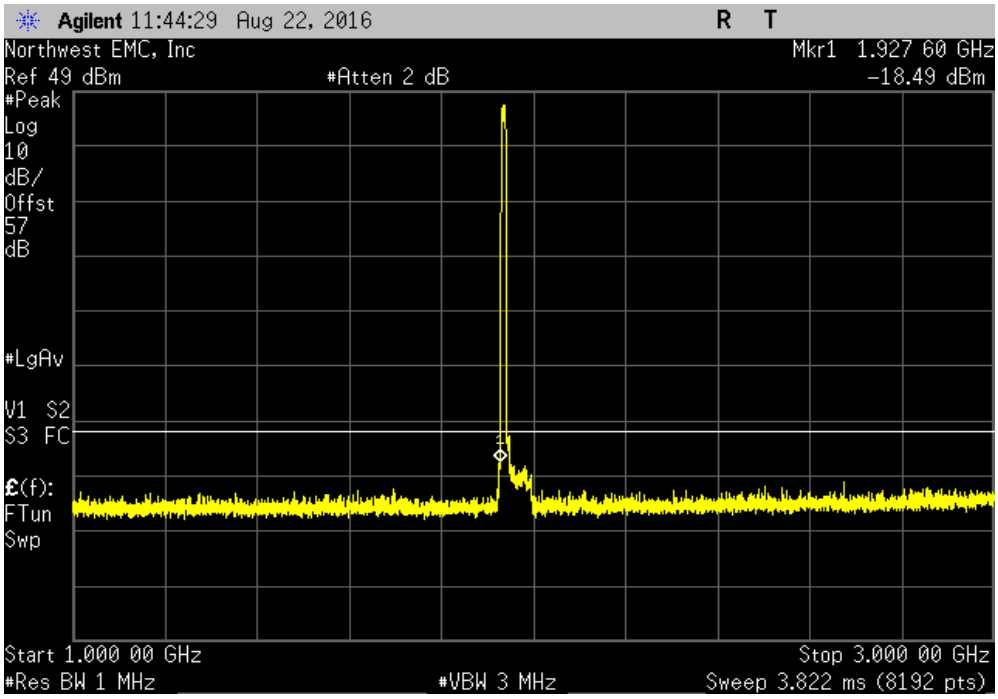
Antenna Port 2, High Channel LTE5, 1987.5 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.79	-13	Pass



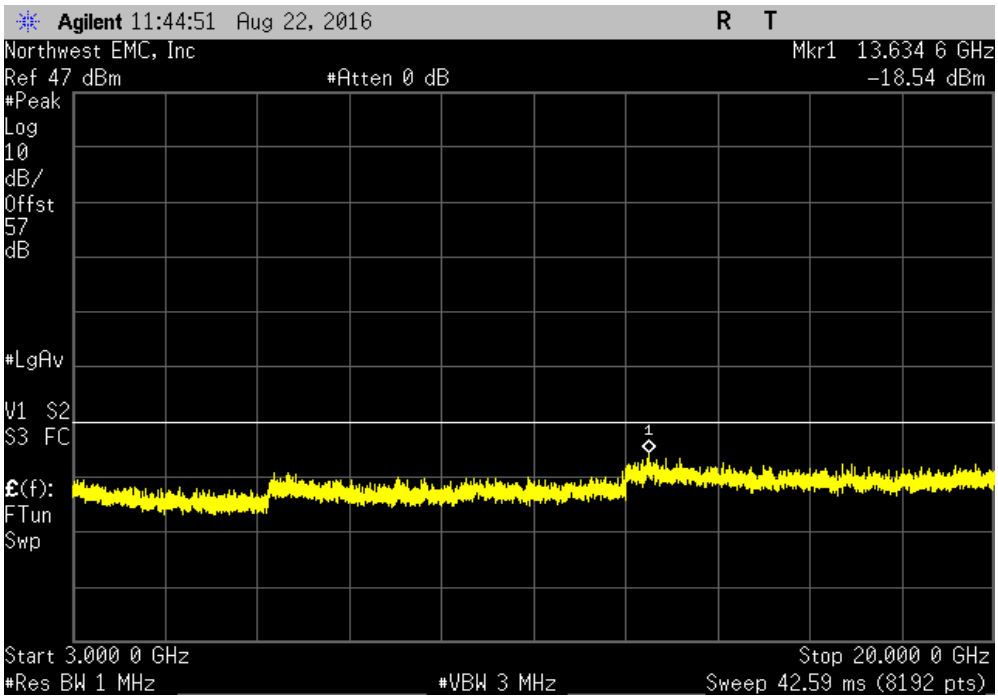
Antenna Port 2, Low Channel LTE10, 1935 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-36.04	-13	Pass



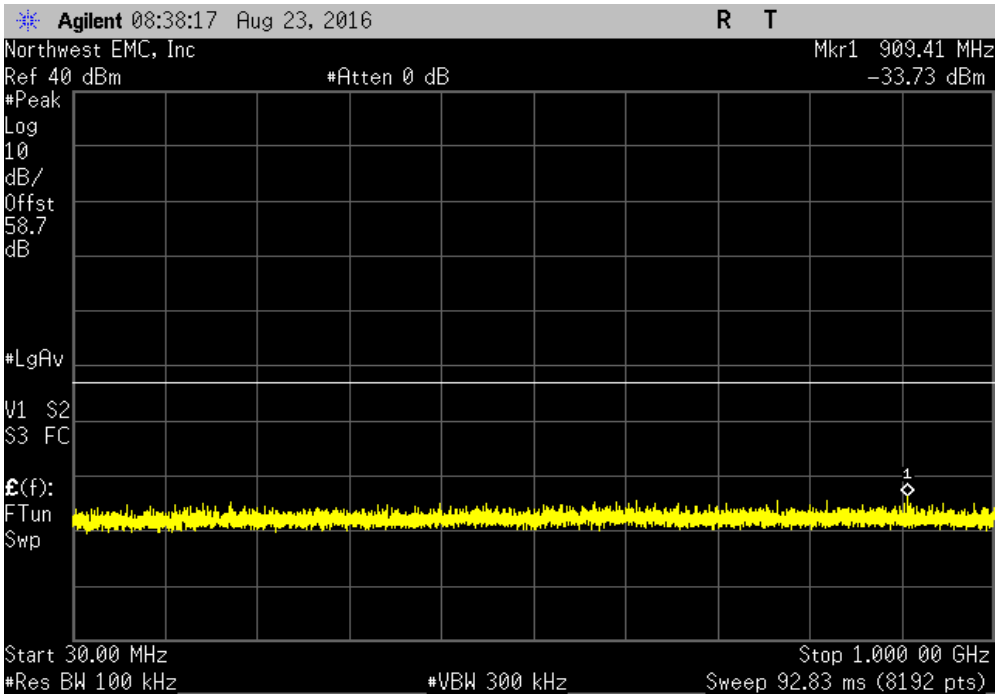
Antenna Port 2, Low Channel LTE10, 1935 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-18.49	-13	Pass



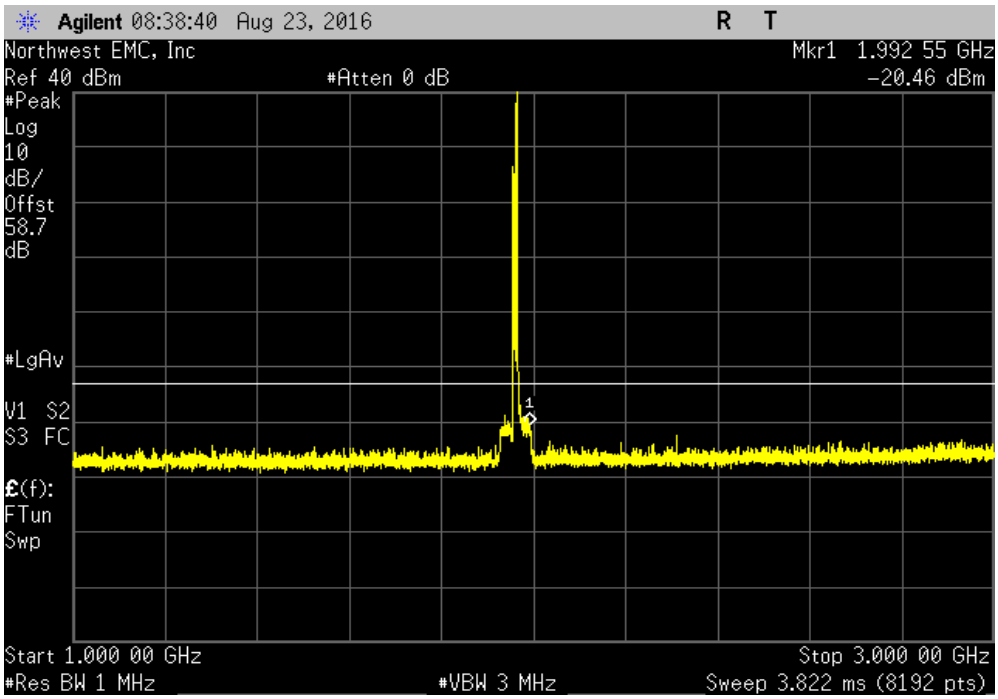
Antenna Port 2, Low Channel LTE10, 1935 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.54	-13	Pass



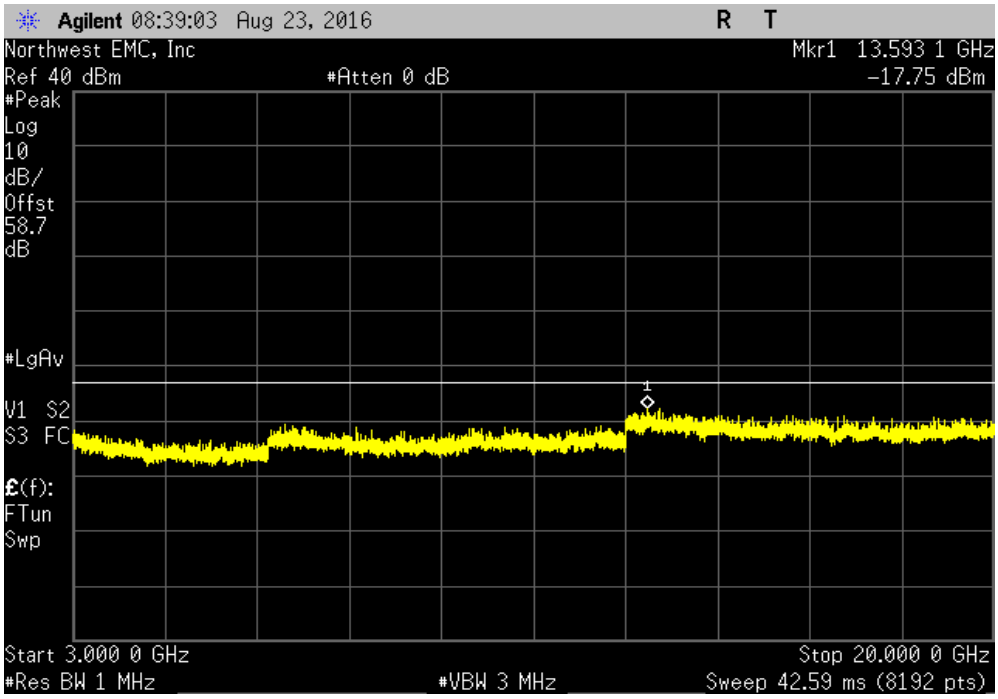
Antenna Port 2, Mid Channel LTE10, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.73	-13	Pass



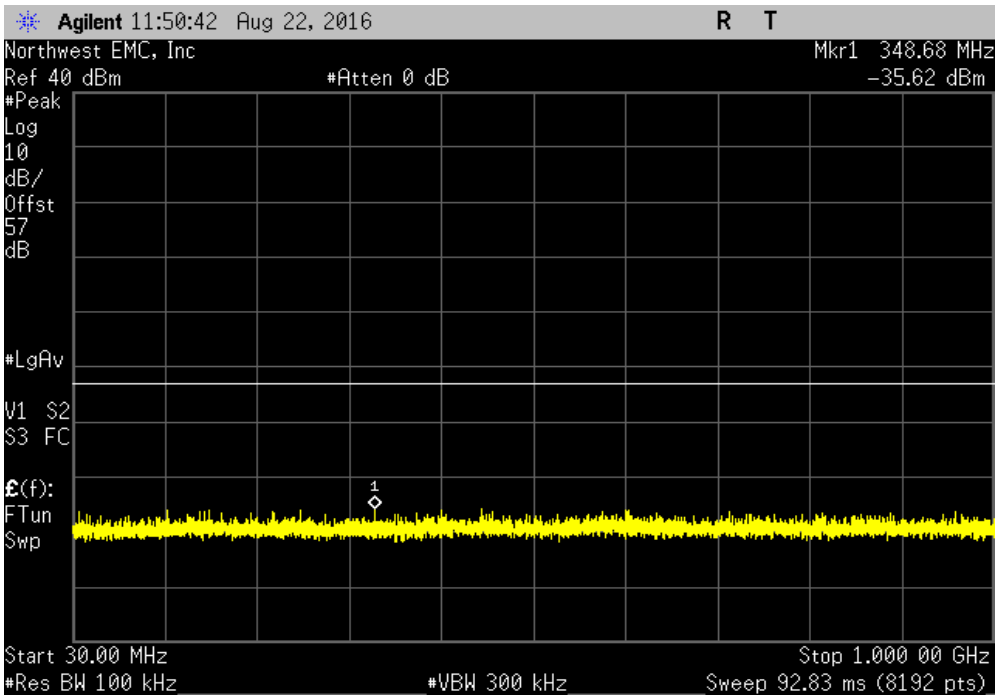
Antenna Port 2, Mid Channel LTE10, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.46	-13	Pass



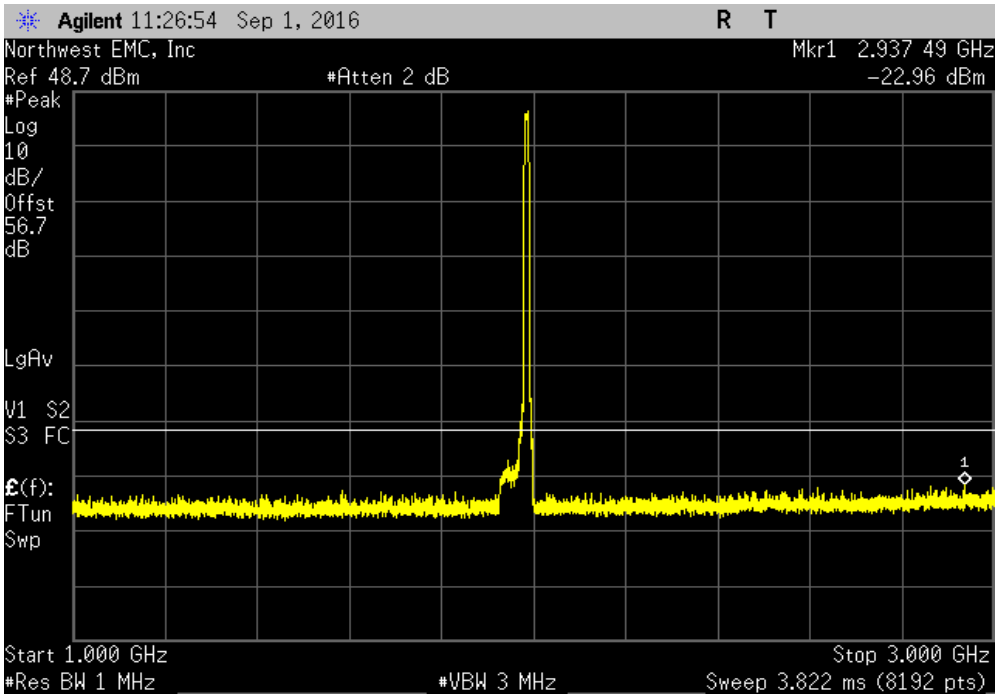
Antenna Port 2, Mid Channel LTE10, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-17.75	-13	Pass



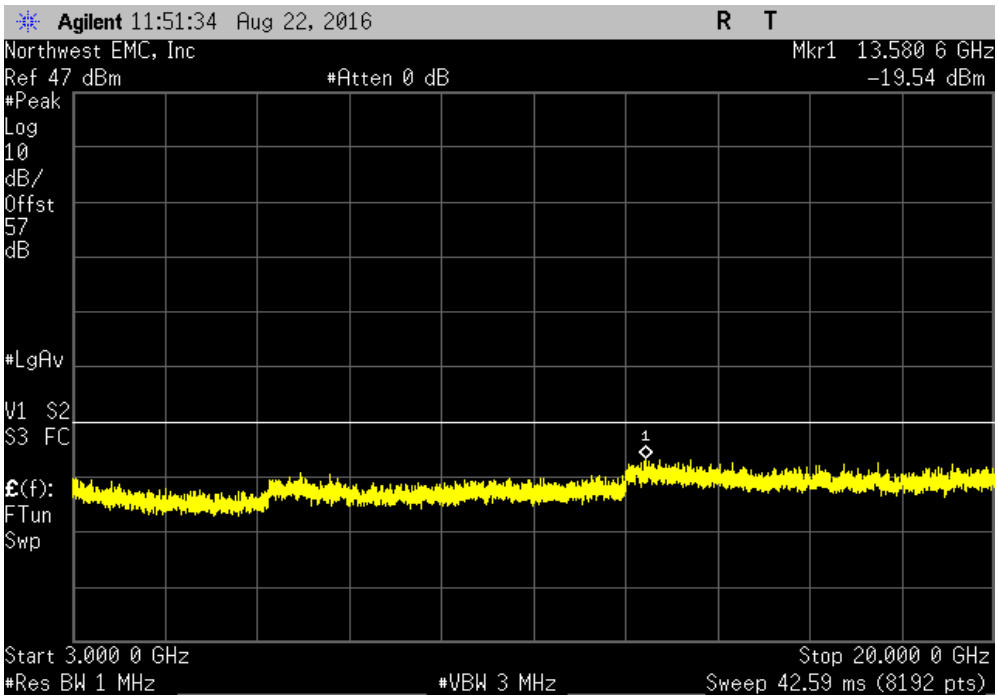
Antenna Port 2, High Channel LTE10, 1985 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.62	-13	Pass



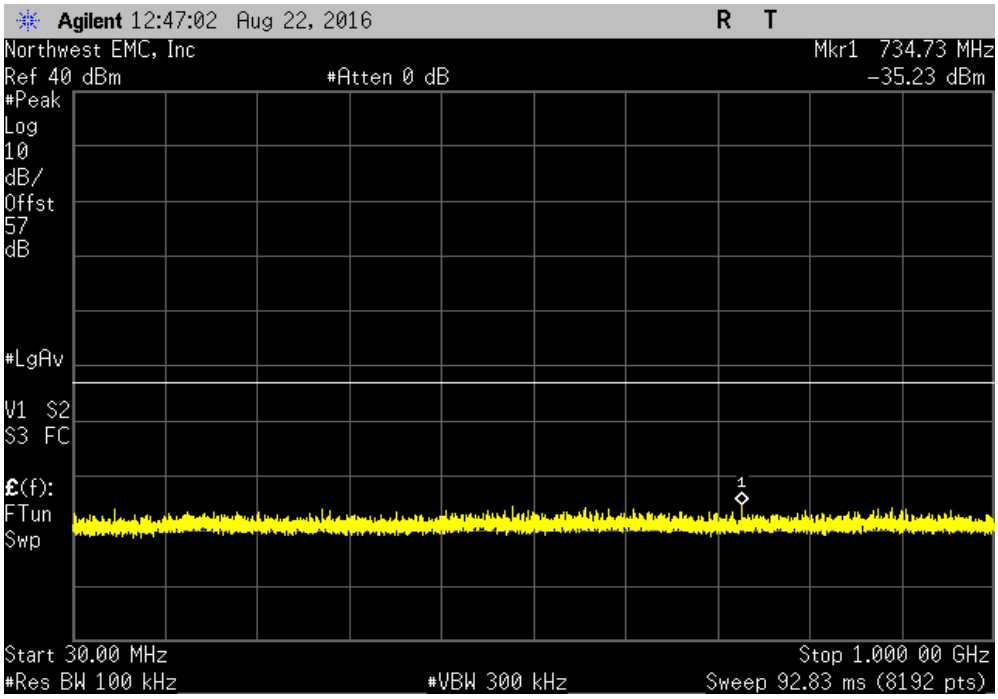
Antenna Port 2, High Channel LTE10, 1985 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.96	-13	Pass



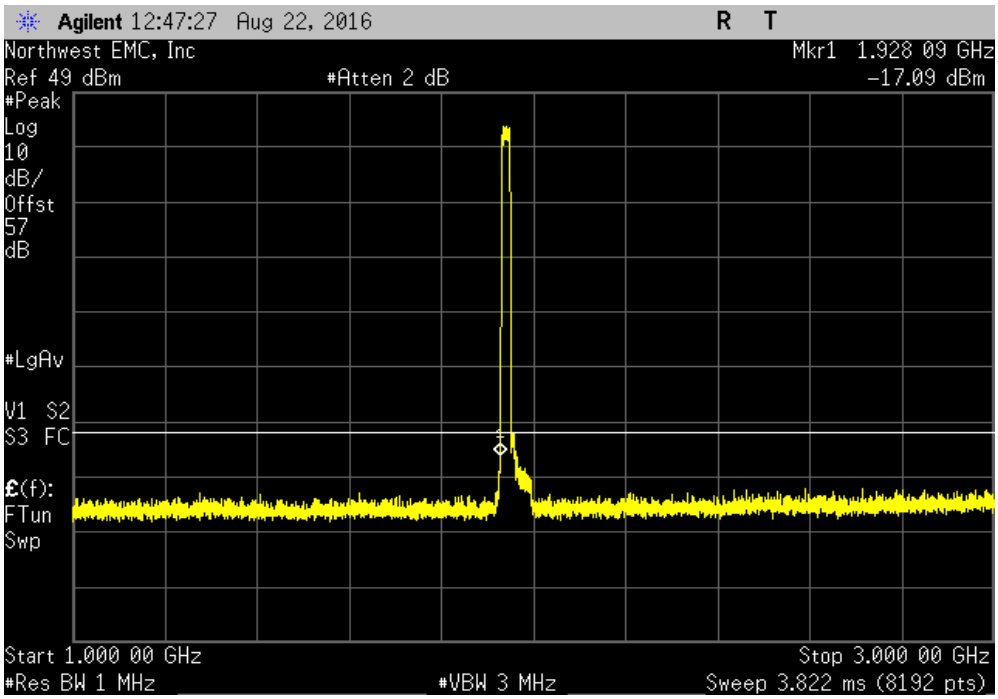
Antenna Port 2, High Channel LTE10, 1985 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.54	-13	Pass



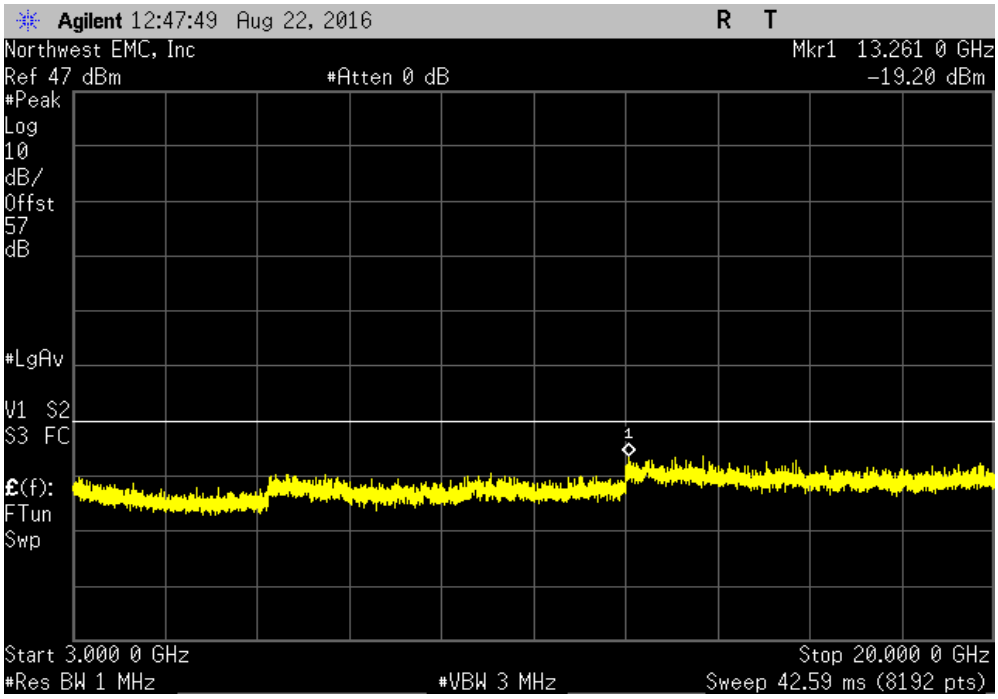
Antenna Port 2, Low Channel LTE20, 1940 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.23	-13	Pass



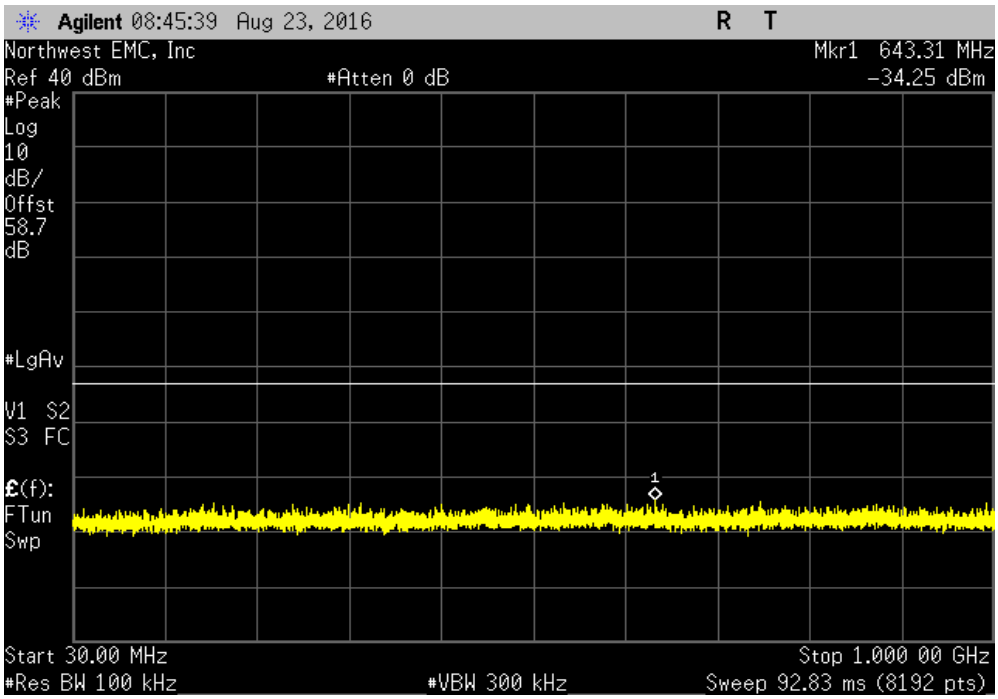
Antenna Port 2, Low Channel LTE20, 1940 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-17.09	-13	Pass



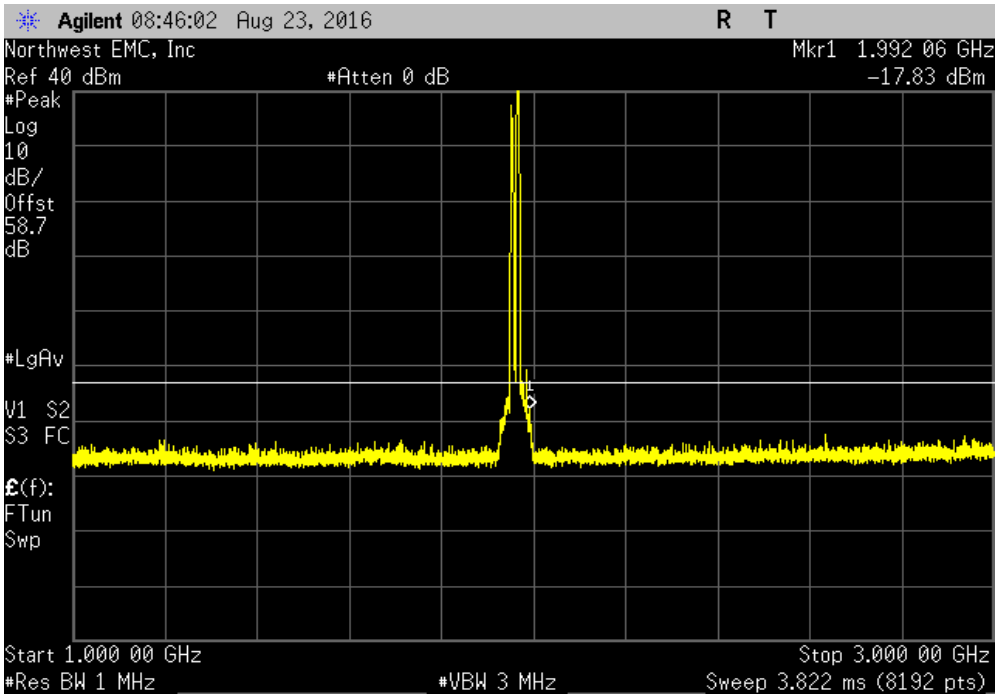
Antenna Port 2, Low Channel LTE20, 1940 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.20	-13	Pass



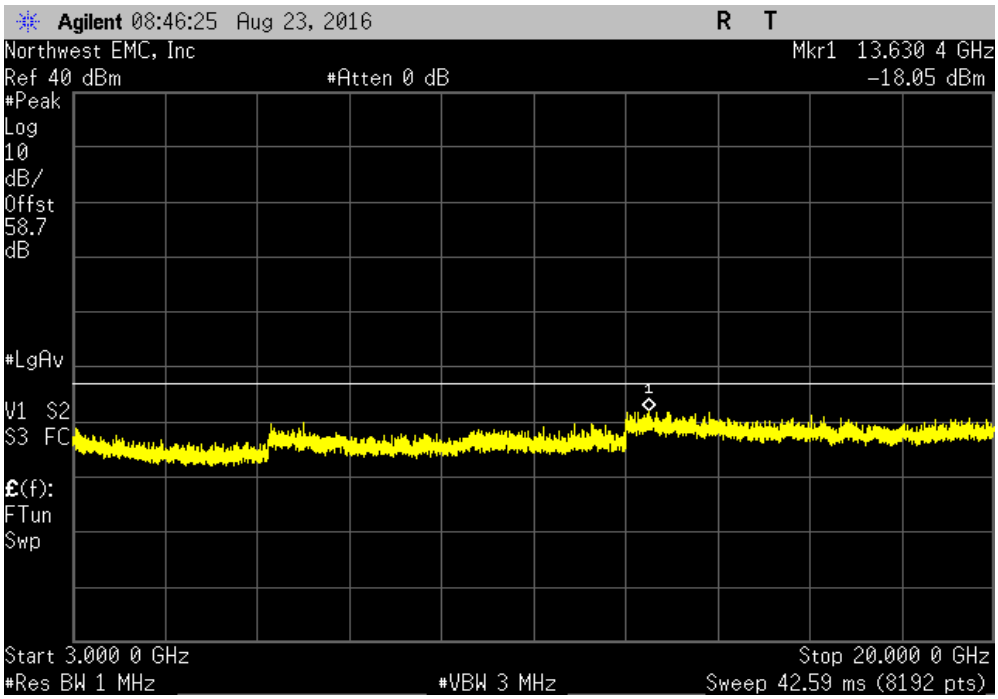
Antenna Port 2, Mid Channel LTE20, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.25	-13	Pass



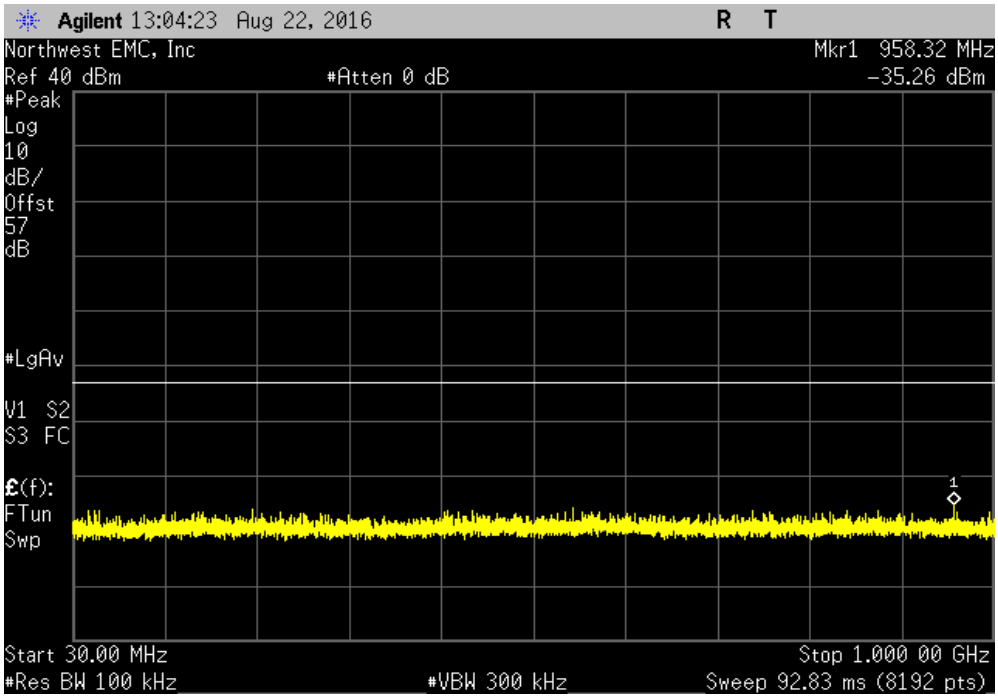
Antenna Port 2, Mid Channel LTE20, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-17.83	-13	Pass



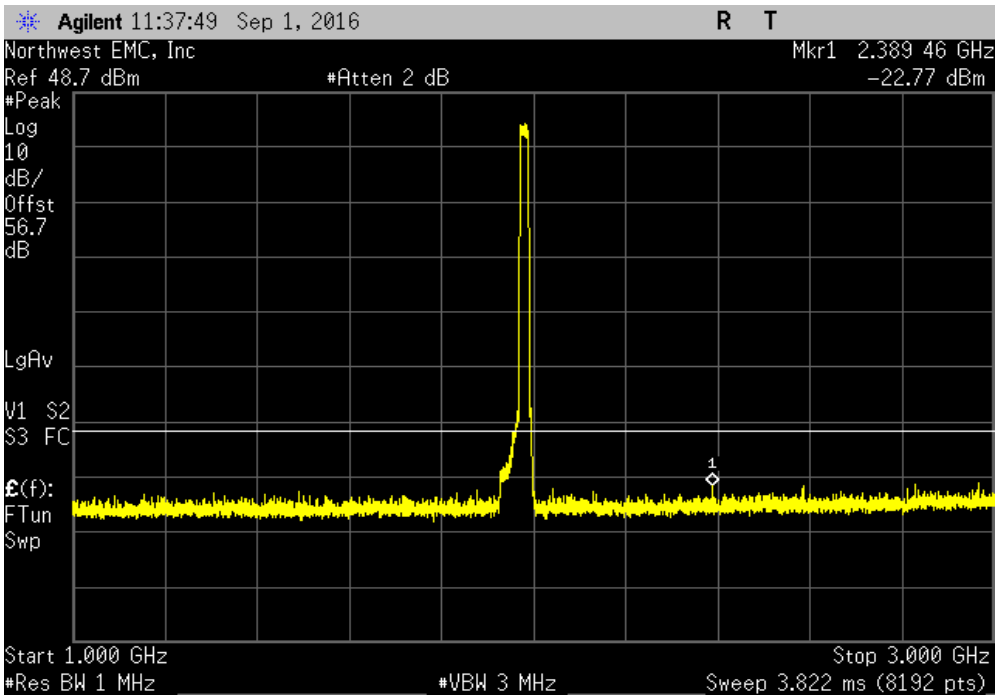
Antenna Port 2, Mid Channel LTE20, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.05	-13	Pass



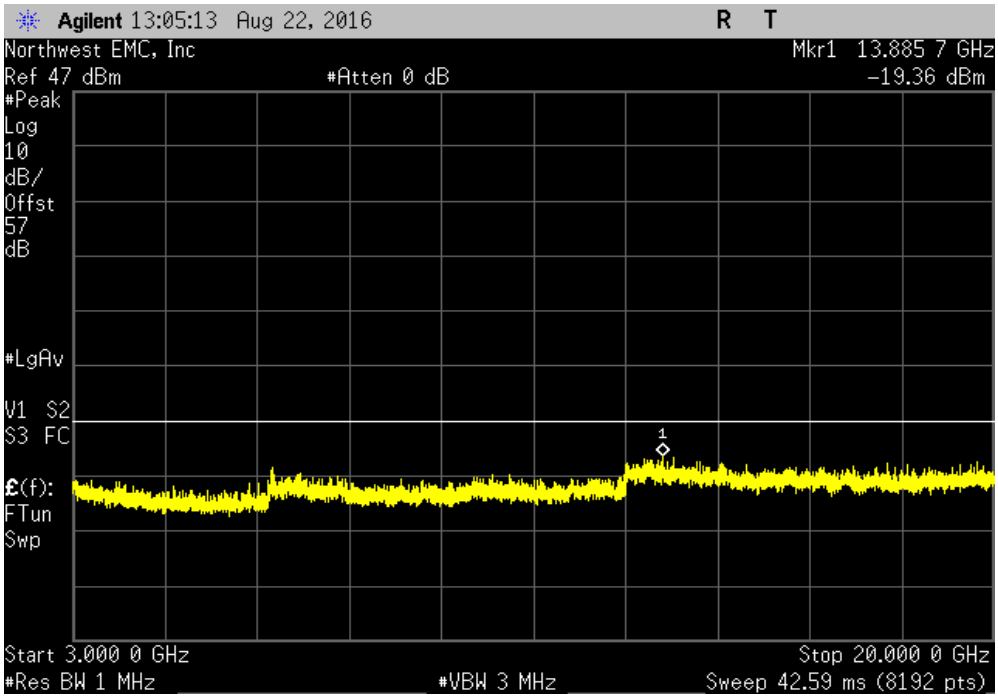
Antenna Port 2, High Channel LTE20, 1980 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.26	-13	Pass



Antenna Port 2, High Channel LTE20, 1980 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.77	-13	Pass



Antenna Port 2, High Channel LTE20, 1980 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.36	-13	Pass



SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS - WCDMA

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Filter - Band Pass/Notch	K&L Microwave	3TNF-1000/2000-N/N	HFS	11/3/2015	11/3/2016
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Analyzer plots utilizing appropriate resolution bandwidth (frequency dependant) and no video filtering were made for each mode listed in the datasheet.

The peak conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to the limit.

SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS - WCDMA

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0076
Serial Number:	K163000003			**Date:**	09/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	21.6 °C
Attendees:	Edward Lee			**Humidity:**	49.8% RH
Project:	None			**Barometric Pres.:**	1016 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total for low and high channels.
For mid channel a tunable notch filter was used to allow proper noise floor sensitivity, total offset including filter = 58.6dB for mid channel.

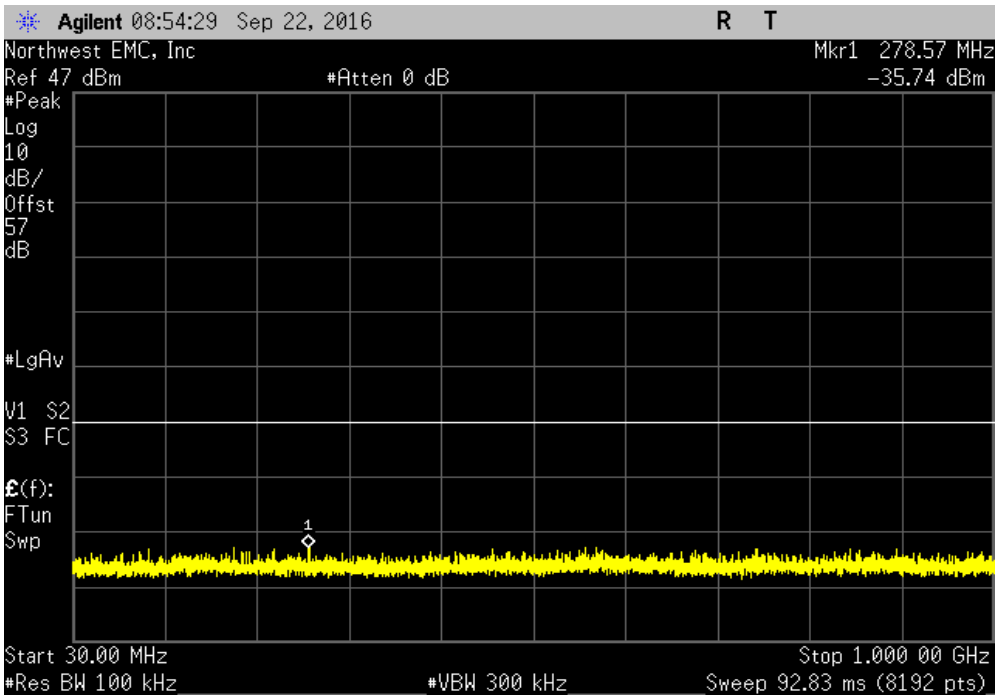
DEVIATIONS FROM TEST STANDARD

None

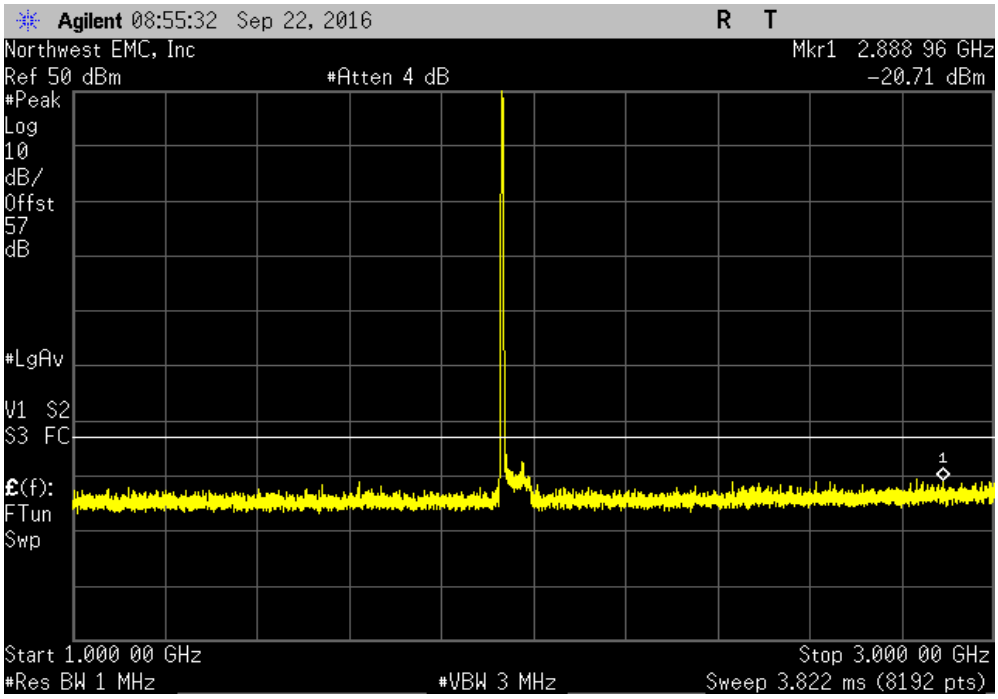
Configuration #	1	Signature

		Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result
Antenna Port 1					
	Low Channel WCDMA, 1932.4 MHz	30 MHz - 1 GHz	-35.74	-13	Pass
	Low Channel WCDMA, 1932.4 MHz	1 GHz - 3 GHz	-20.71	-13	Pass
	Low Channel WCDMA, 1932.4 MHz	3 GHz - 20 GHz	-19.59	-13	Pass
	Mid Channel WCDMA, 1960 MHz	30 MHz - 1 GHz	-33.69	-13	Pass
	Mid Channel WCDMA, 1960 MHz	1 GHz - 3 GHz	-22.50	-13	Pass
	Mid Channel WCDMA, 1960 MHz	3 GHz - 20 GHz	-19.26	-13	Pass
	High Channel WCDMA, 1987.6 MHz	30 MHz - 1 GHz	-35.28	-13	Pass
	High Channel WCDMA, 1987.6 MHz	1 GHz - 3 GHz	-20.89	-13	Pass
	High Channel WCDMA, 1987.6 MHz	3 GHz - 20 GHz	-18.99	-13	Pass
Antenna Port 2					
	Low Channel WCDMA, 1932.4 MHz	30 MHz - 1 GHz	-35.61	-13	Pass
	Low Channel WCDMA, 1932.4 MHz	1 GHz - 3 GHz	-20.49	-13	Pass
	Low Channel WCDMA, 1932.4 MHz	3 GHz - 20 GHz	-18.94	-13	Pass
	Mid Channel WCDMA, 1960 MHz	30 MHz - 1 GHz	-33.49	-13	Pass
	Mid Channel WCDMA, 1960 MHz	1 GHz - 3 GHz	-23.32	-13	Pass
	Mid Channel WCDMA, 1960 MHz	3 GHz - 20 GHz	-19.74	-13	Pass
	High Channel WCDMA, 1987.6 MHz	30 MHz - 1 GHz	-35.68	-13	Pass
	High Channel WCDMA, 1987.6 MHz	1 GHz - 3 GHz	-19.58	-13	Pass
	High Channel WCDMA, 1987.6 MHz	3 GHz - 20 GHz	-19.35	-13	Pass

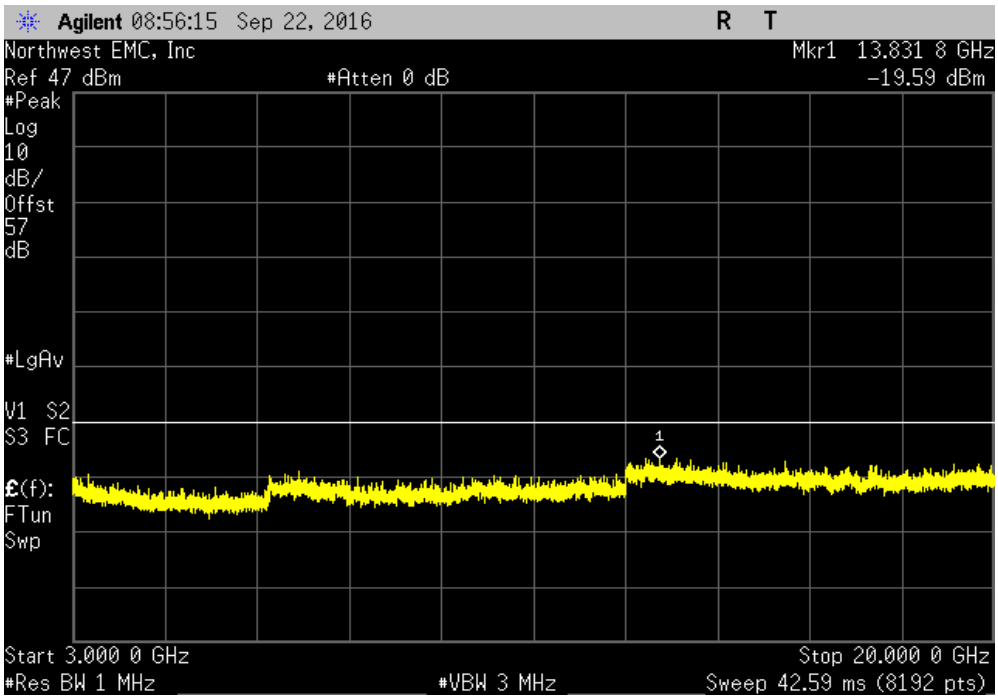
Antenna Port 1, Low Channel WCDMA, 1932.4 MHz					
Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
30 MHz - 1 GHz			-35.74	-13	Pass



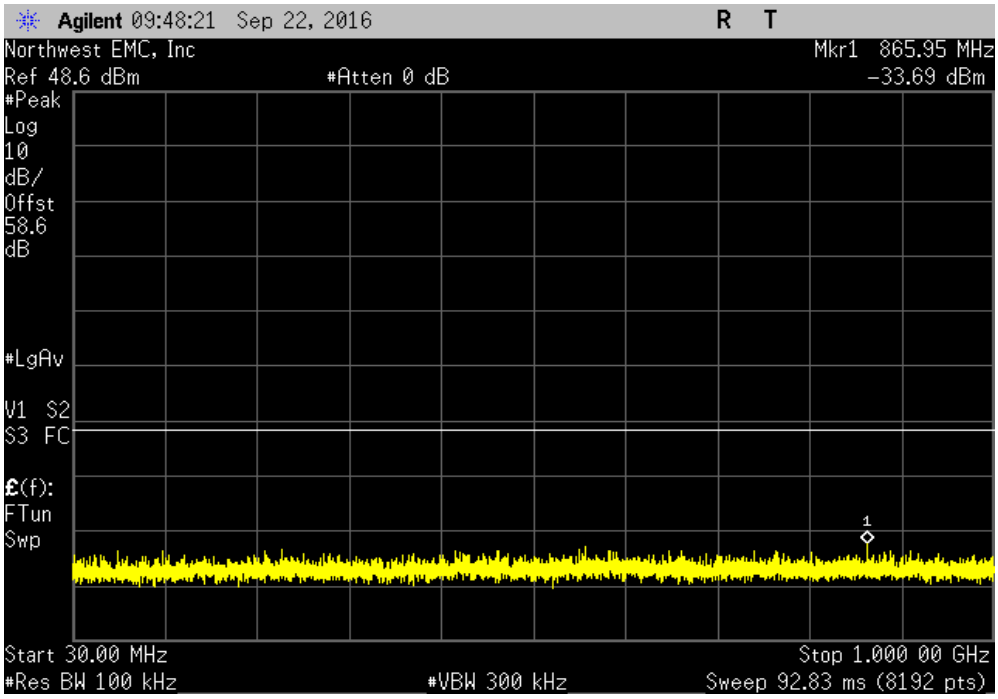
Antenna Port 1, Low Channel WCDMA, 1932.4 MHz					
Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
1 GHz - 3 GHz			-20.71	-13	Pass



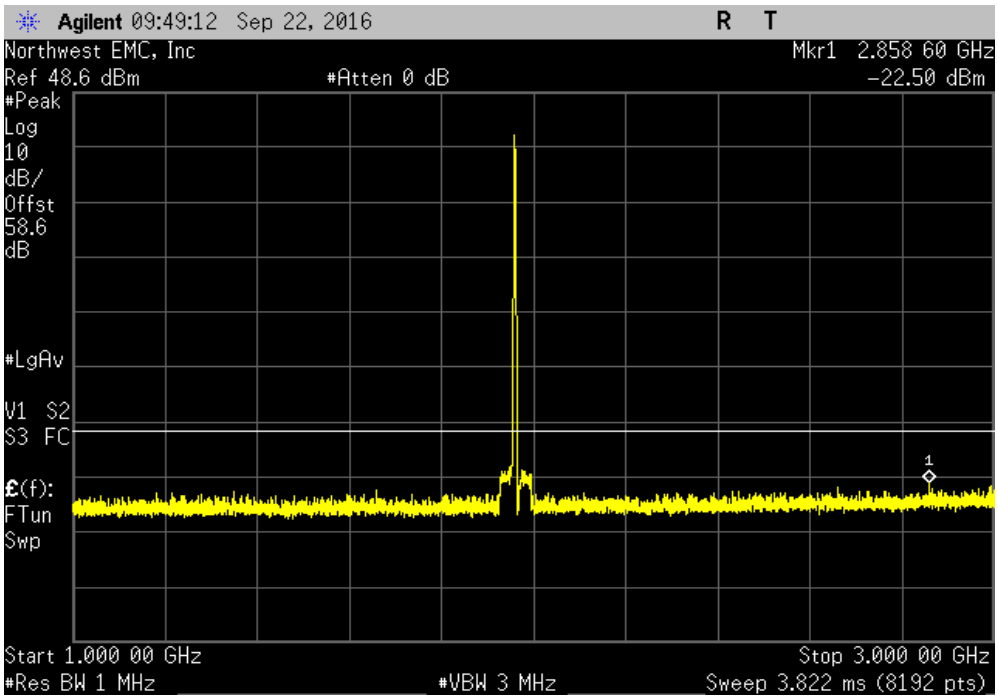
Antenna Port 1, Low Channel WCDMA, 1932.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.59	-13	Pass



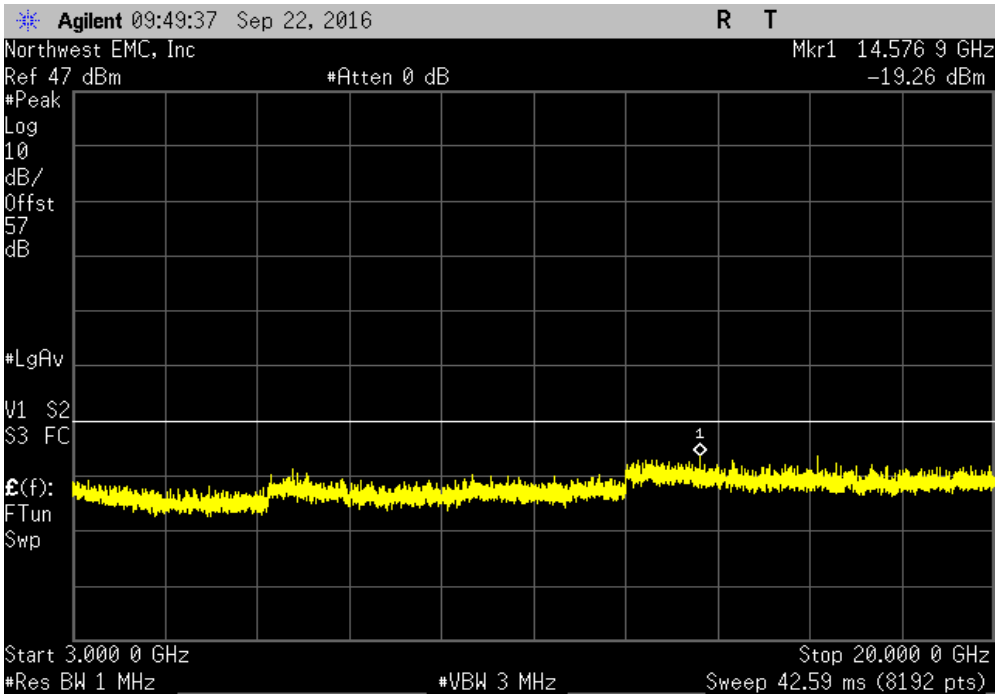
Antenna Port 1, Mid Channel WCDMA, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.69	-13	Pass



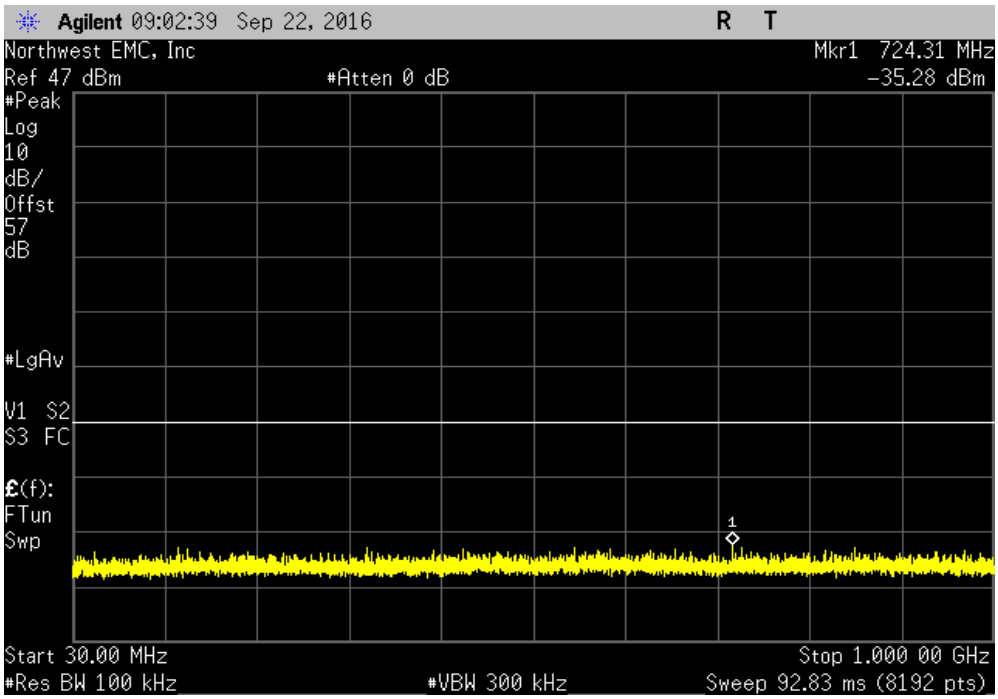
Antenna Port 1, Mid Channel WCDMA, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.50	-13	Pass



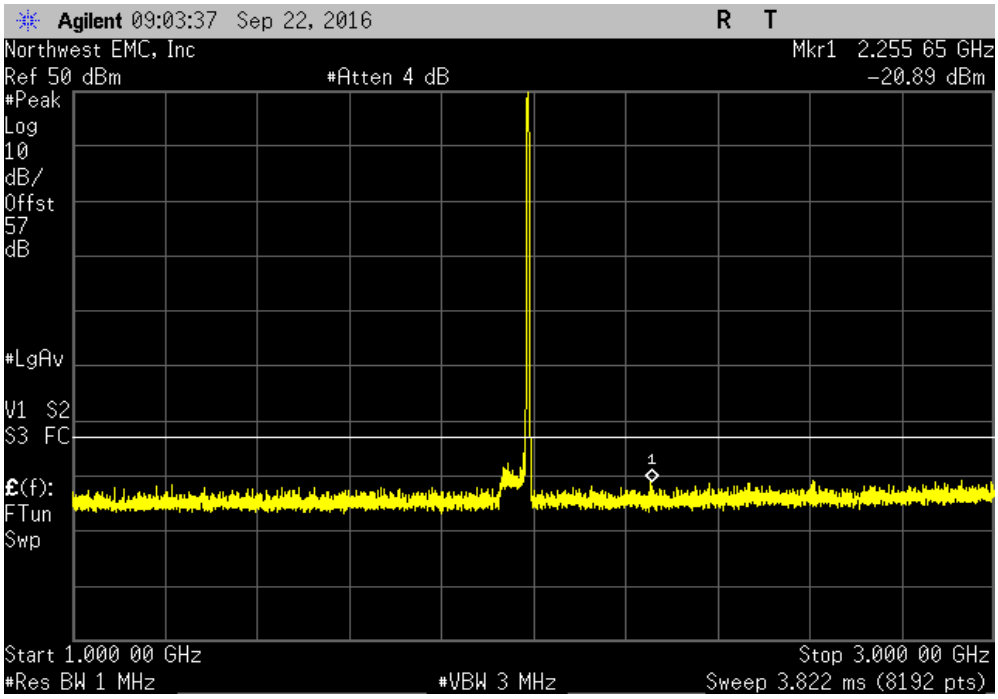
Antenna Port 1, Mid Channel WCDMA, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.26	-13	Pass



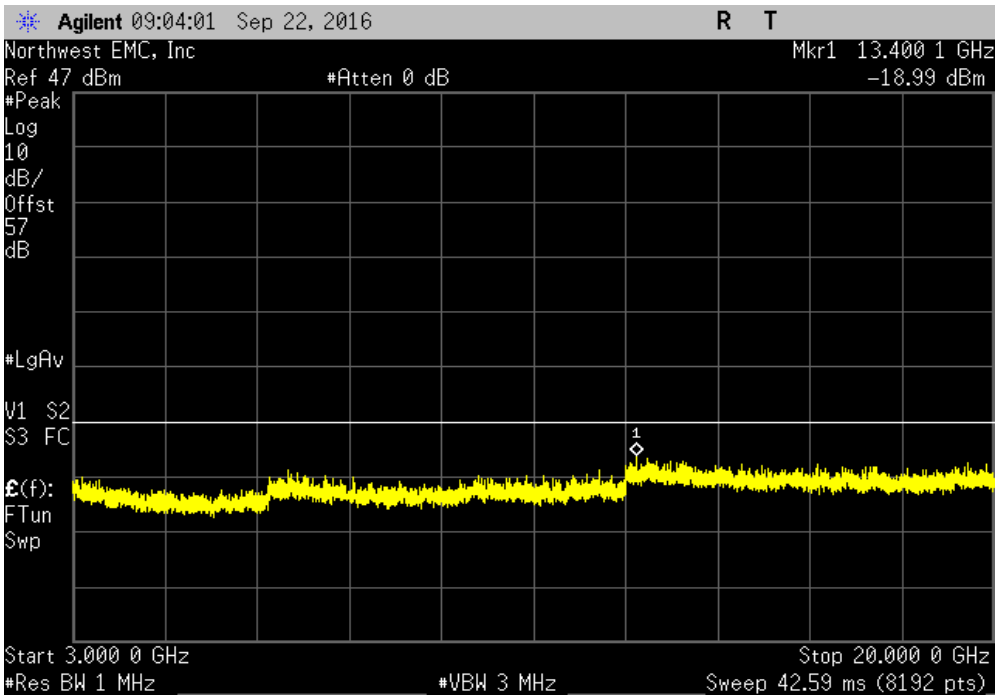
Antenna Port 1, High Channel WCDMA, 1987.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.28	-13	Pass



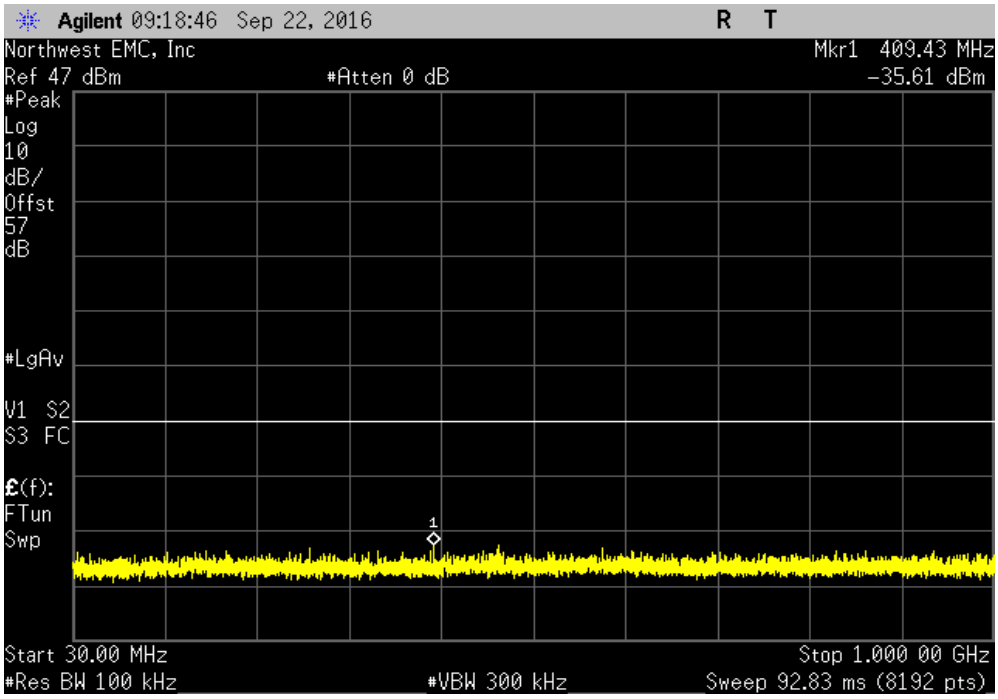
Antenna Port 1, High Channel WCDMA, 1987.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.89	-13	Pass



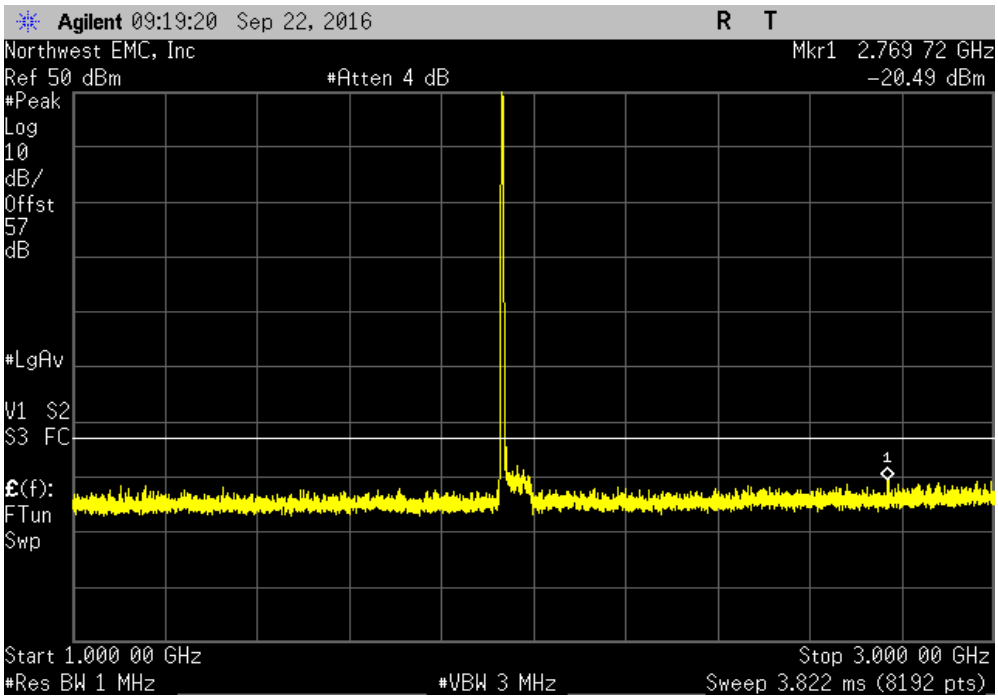
Antenna Port 1, High Channel WCDMA, 1987.6 MHz					
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result	
3 GHz - 20 GHz		-18.99	-13	Pass	



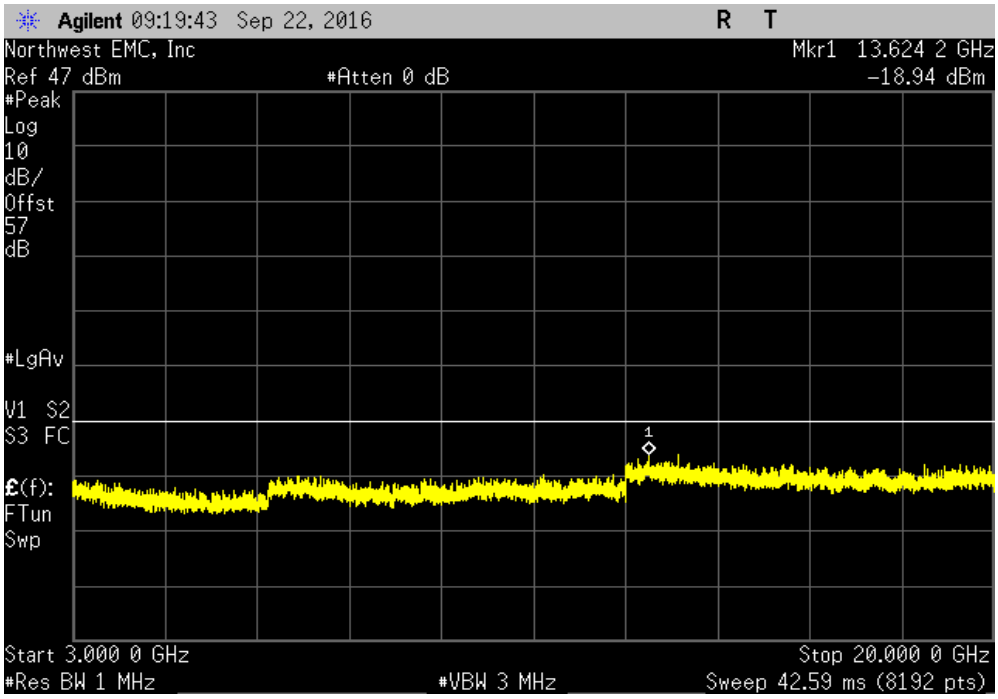
Antenna Port 2, Low Channel WCDMA, 1932.4 MHz					
Frequency Range		Max Value (dBm)	Limit ≤ (dBm)	Result	
30 MHz - 1 GHz		-35.61	-13	Pass	



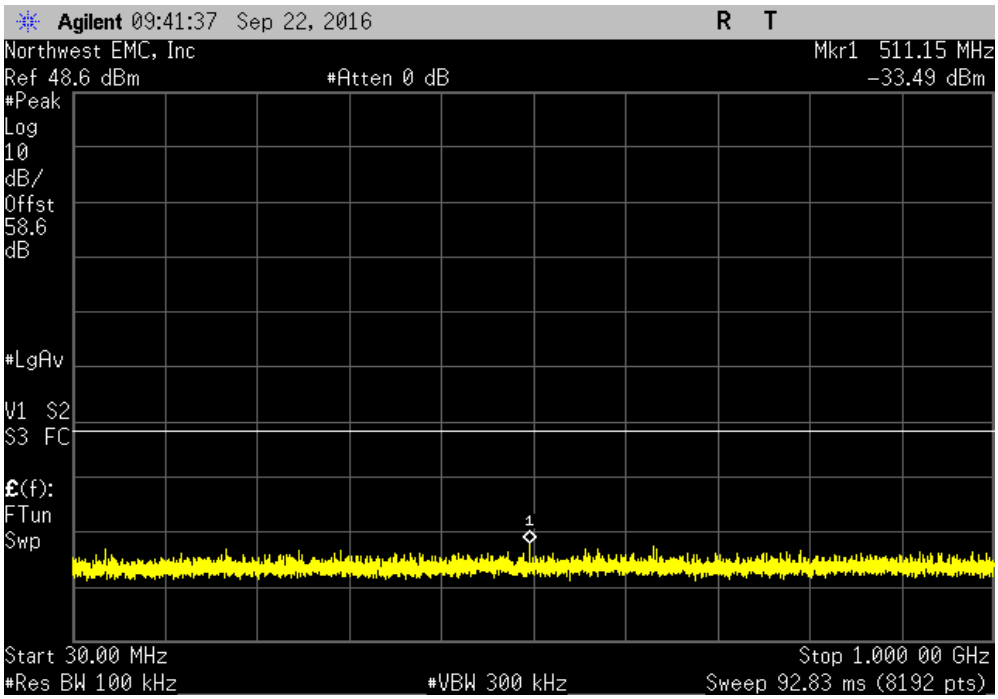
Antenna Port 2, Low Channel WCDMA, 1932.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.49	-13	Pass



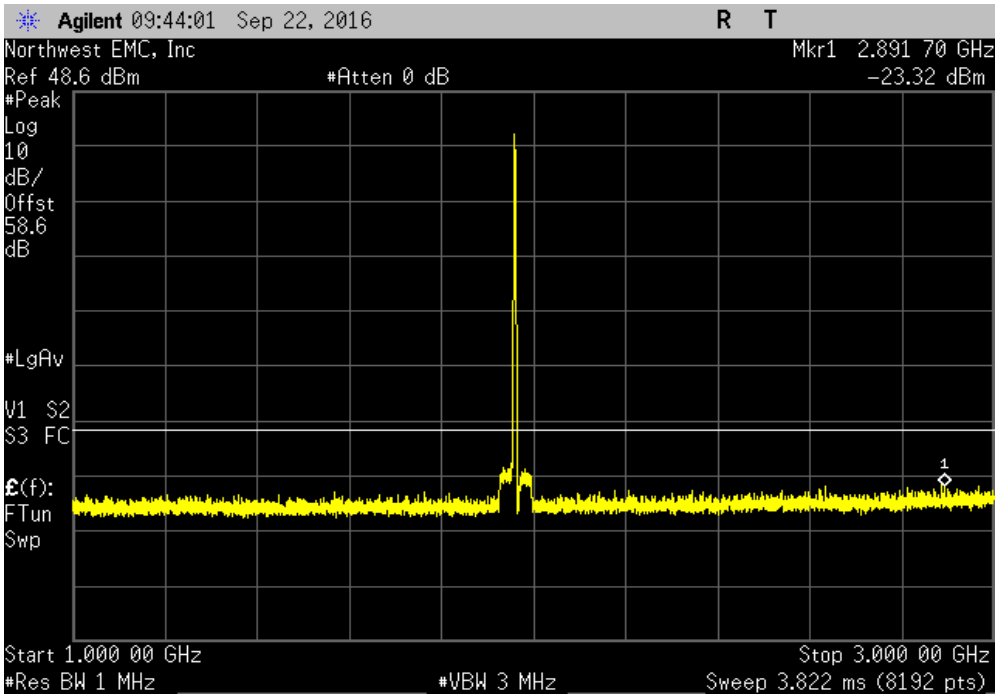
Antenna Port 2, Low Channel WCDMA, 1932.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.94	-13	Pass



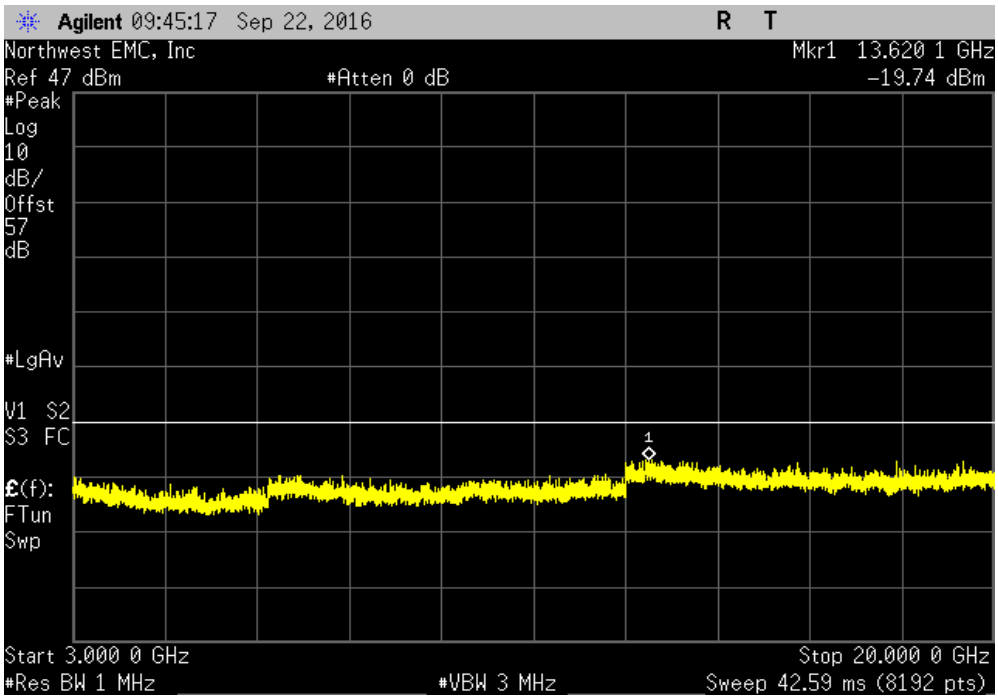
Antenna Port 2, Mid Channel WCDMA, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.49	-13	Pass



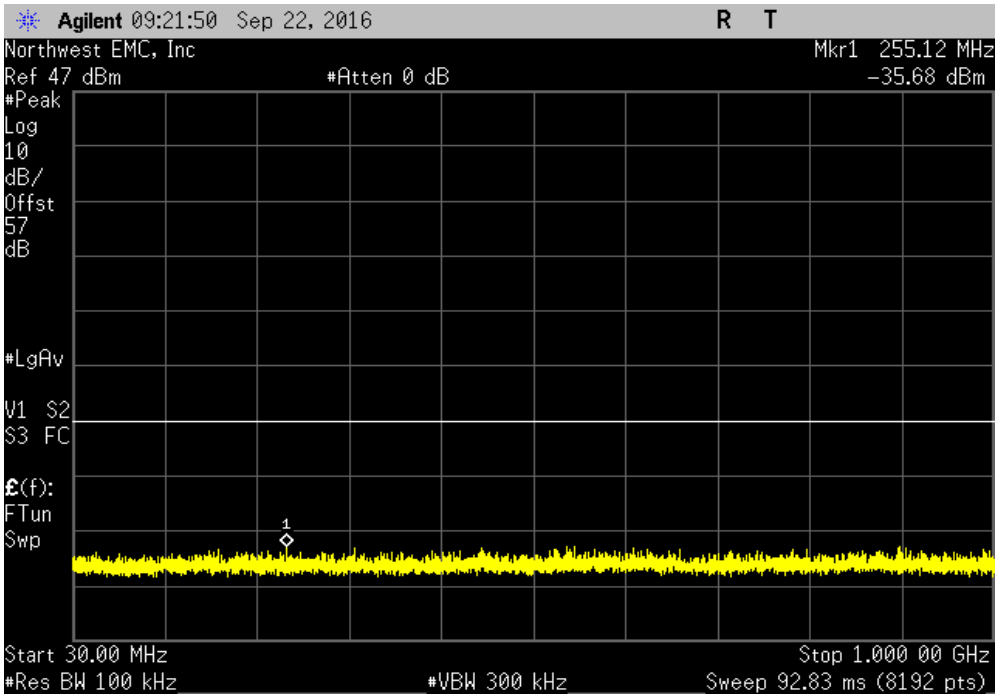
Antenna Port 2, Mid Channel WCDMA, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-23.32	-13	Pass



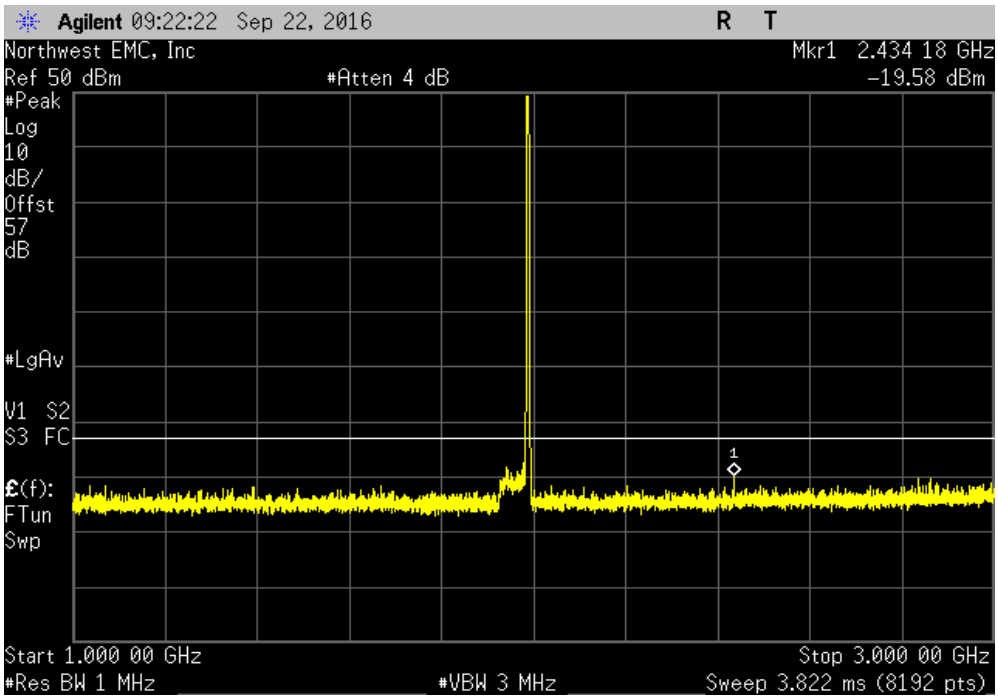
Antenna Port 2, Mid Channel WCDMA, 1960 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.74	-13	Pass



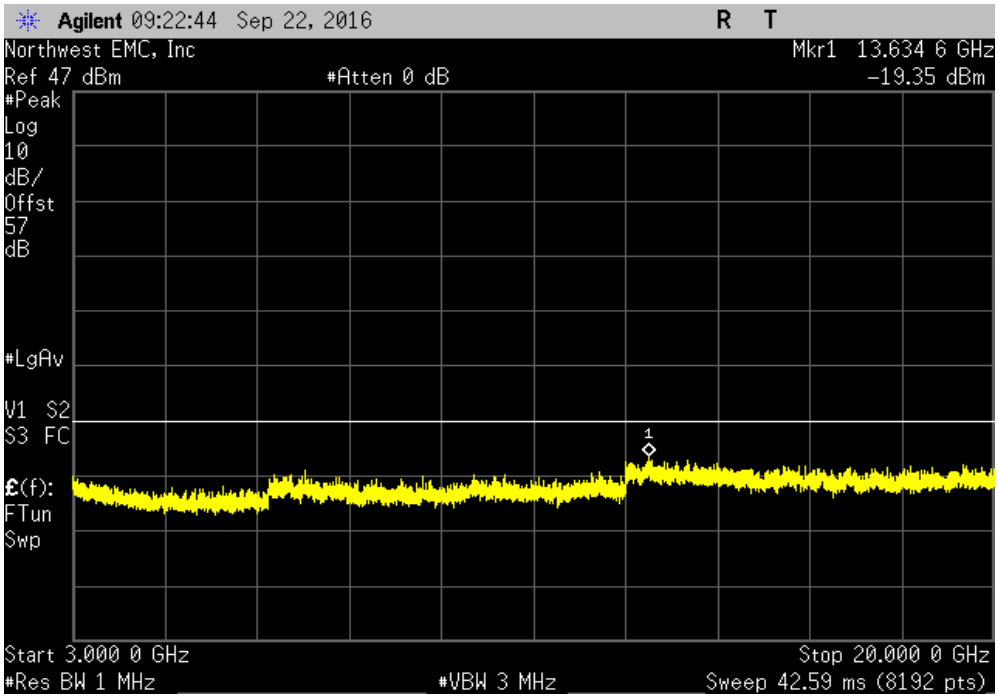
Antenna Port 2, High Channel WCDMA, 1987.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.68	-13	Pass



Antenna Port 2, High Channel WCDMA, 1987.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.58	-13	Pass



Antenna Port 2, High Channel WCDMA, 1987.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.35	-13	Pass



INTERMODULATION - LTE BAND 2

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Filter - Band Pass/Notch	K&L Microwave	3TNF-1000/2000-N/N	HFS	11/3/2015	11/3/2016
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Analyzer plots utilizing appropriate resolution bandwidth and no video filtering were made for each modulation type.

Since the EUT does not have an RF Input, the EUT was configured with two modulated carriers, 1 at the edge of the band and the 2nd either adjacent or at max separation possible. The purpose of the test is to insure that no additional signals are creating by having multiple carriers in the passband of the EUT.

The peak conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to the spurious conducted emissions limits. Measurements close to the limit were re-measured using a RMS average detector.

INTERMODULATION - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0073
Serial Number:	K163000003			**Date:**	08/23/16
Customer:	Parallel Wireless Inc.			**Temperature:**	22.1 °C
Attendees:	Andy Ku			**Humidity:**	47.8% RH
Project:	None			**Barometric Pres.:**	1014 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	**Test Method**
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

Configuration #	1	*Signature*

	Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result
Antenna Port 1				
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.64	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-20.91	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.03	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.40	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-20.05	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.29	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.20	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-22.68	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.57	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-34.35	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-18.81	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.12	-13	Pass
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.48	-13	Pass
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-21.11	-13	Pass
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.19	-13	Pass
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.67	-13	Pass
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-20.54	-13	Pass
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.21	-13	Pass
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.04	-13	Pass
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-21.89	-13	Pass
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-18.92	-13	Pass
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.11	-13	Pass
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-19.70	-13	Pass
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.45	-13	Pass
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.61	-13	Pass
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-20.69	-13	Pass
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-18.98	-13	Pass
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.97	-13	Pass
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-25.33	-13	Pass
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.72	-13	Pass
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.39	-13	Pass
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-22.12	-13	Pass
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.39	-13	Pass
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.22	-13	Pass
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-24.47	-13	Pass
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.57	-13	Pass
Antenna Port 2				
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-33.98	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-22.00	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-18.84	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.74	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-19.59	-13	Pass
LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.34	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-36.12	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-22.17	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.63	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-34.23	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-18.48	-13	Pass
LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.35	-13	Pass
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.29	-13	Pass
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-20.54	-13	Pass
LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-18.94	-13	Pass
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.47	-13	Pass
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-19.83	-13	Pass
LTE10, 1935 MHz, Low Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.53	-13	Pass
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-34.77	-13	Pass

Antenna Port 2				
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-21.95	-13	Pass
LTE10, 1985 MHz, High Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.47	-13	Pass
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.60	-13	Pass
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-20.48	-13	Pass
LTE10, 1985 MHz, High Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.48	-13	Pass
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.44	-13	Pass
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-20.89	-13	Pass
LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.21	-13	Pass
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.45	-13	Pass
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-24.41	-13	Pass
LTE20, 1940 MHz, Low Band Edge, max offset secondary channel	3 GHz - 20 GHz	-19.95	-13	Pass
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-35.30	-13	Pass
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-21.09	-13	Pass
LTE20, 1980 MHz, High Band Edge, adjacent secondary channel	3 GHz - 20 GHz	-19.18	-13	Pass
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-35.37	-13	Pass
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-19.92	-13	Pass
LTE20, 1980 MHz, High Band Edge, max offset secondary channel	3 GHz - 20 GHz	-18.74	-13	Pass

INTERMODULATION - LTE BAND 2

NORTHWEST EMC

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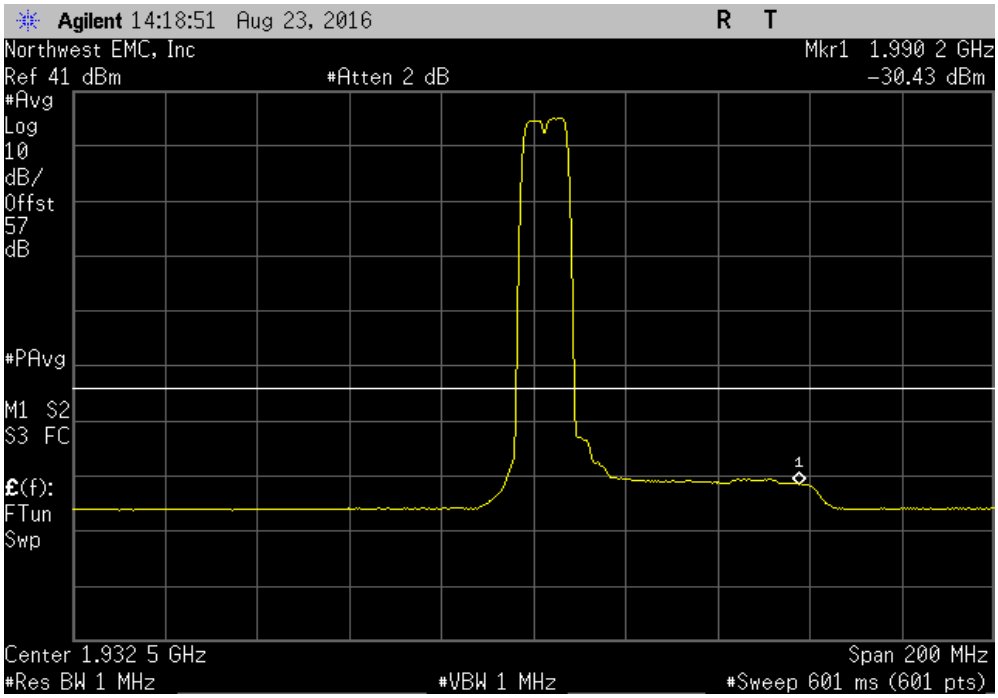
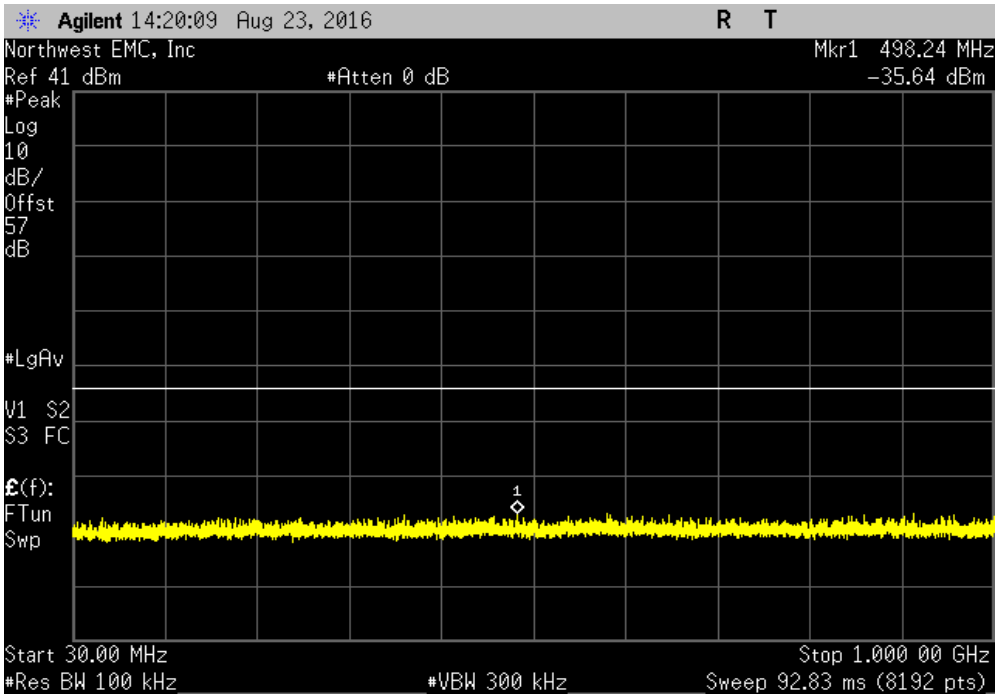
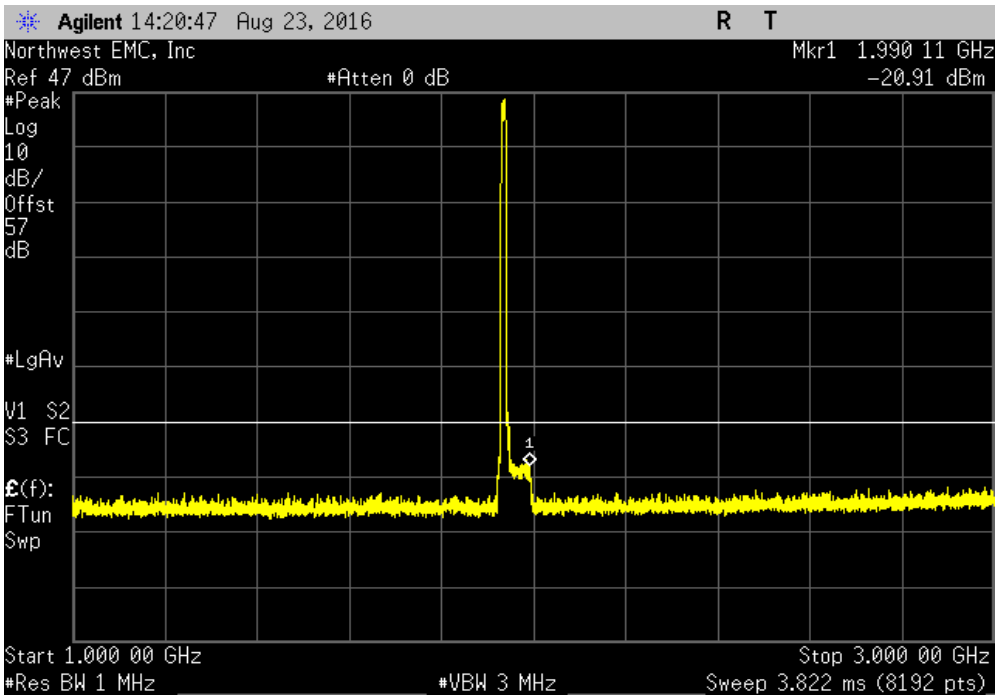
Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



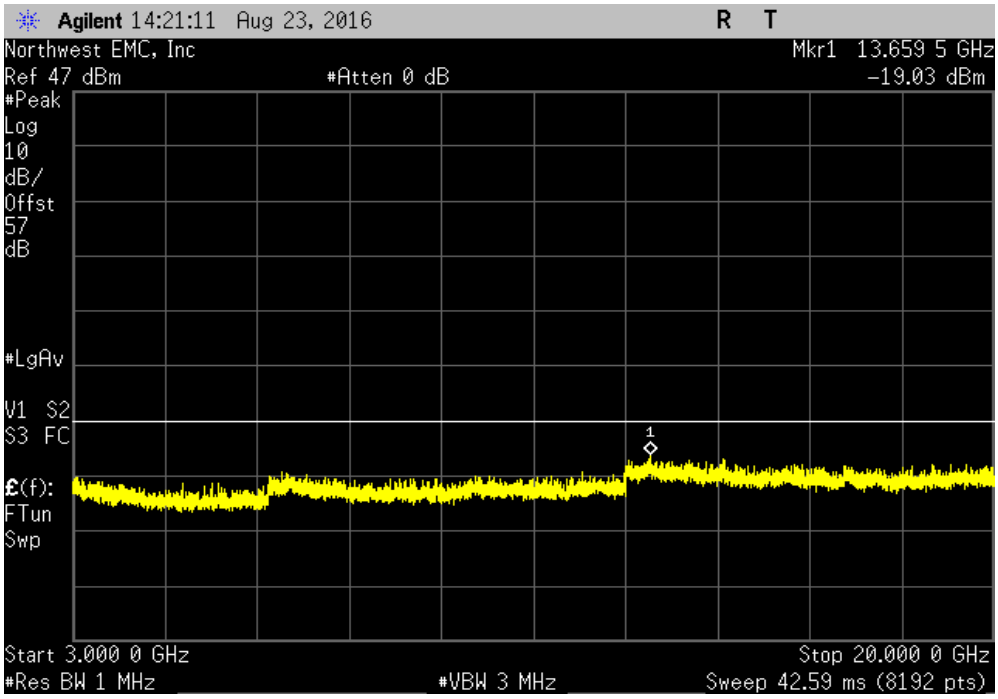
Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.64	-13	Pass



Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.91	-13	Pass



Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.03	-13	Pass



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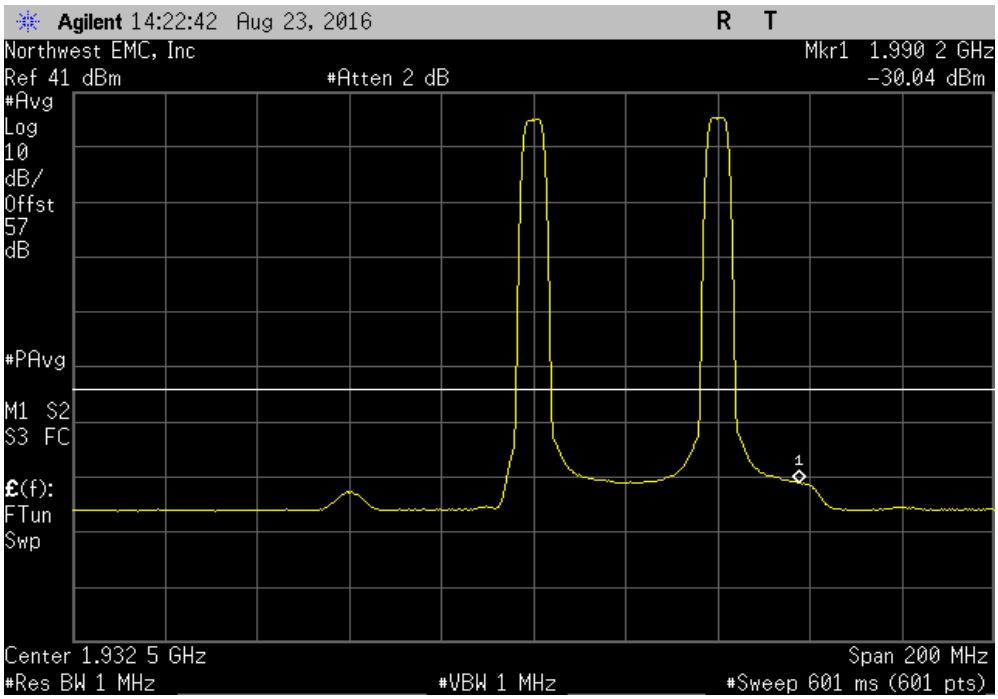
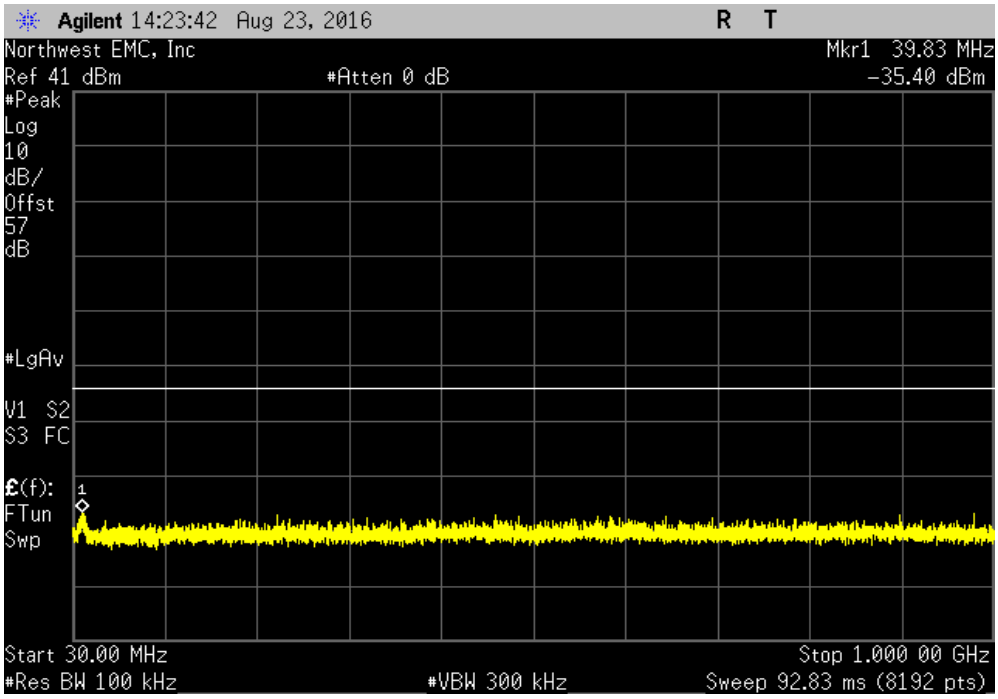
Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.4	-13	Pass



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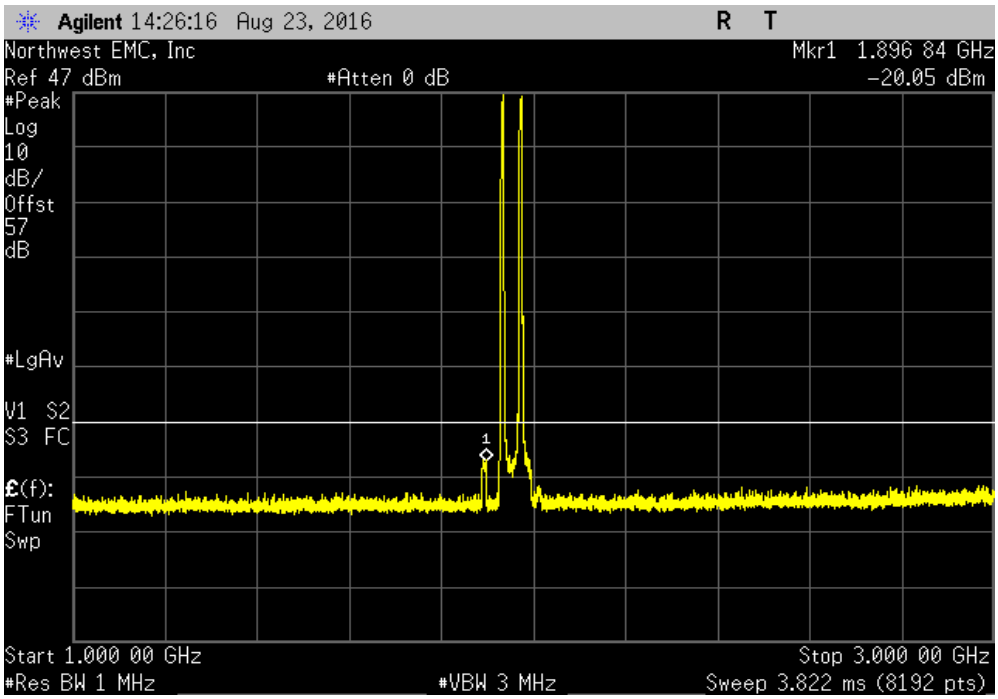
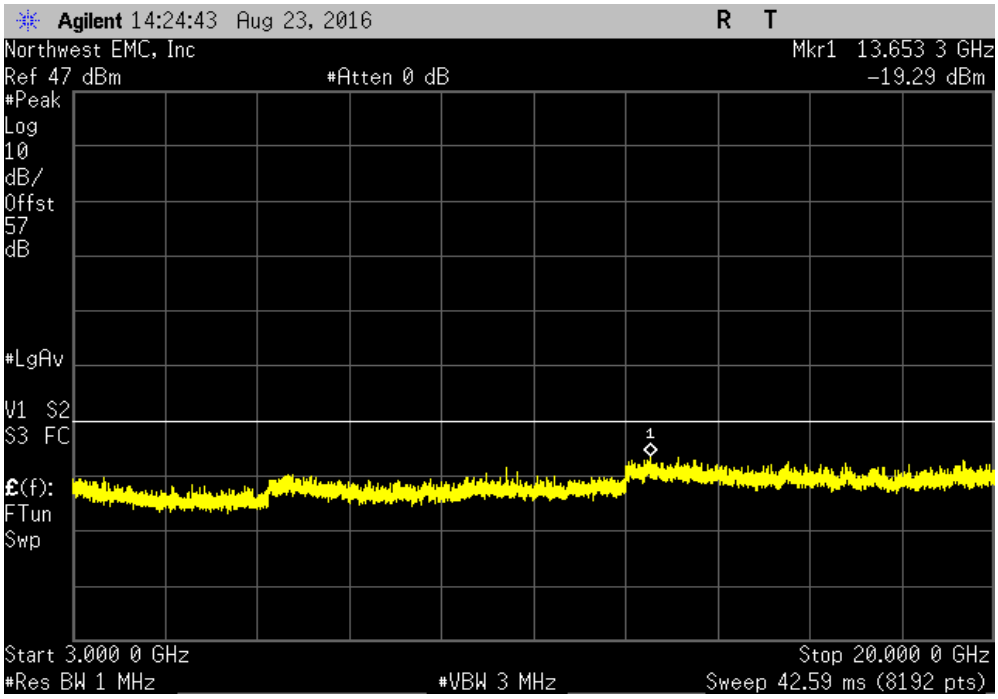
Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.05	-13	Pass



Antenna Port 1, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.29	-13	Pass



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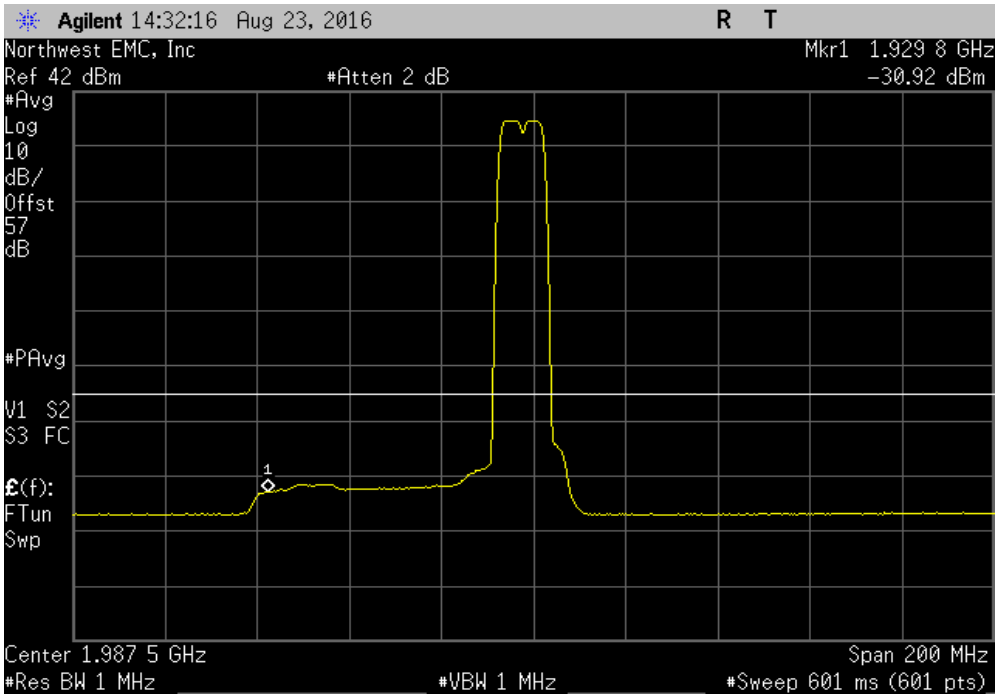
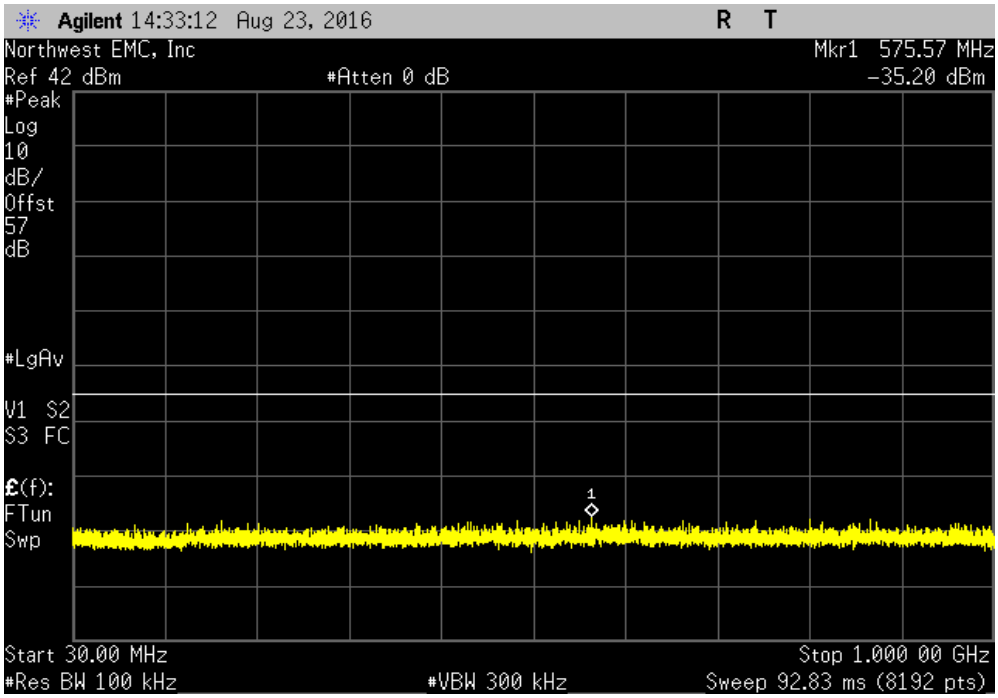
Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.20	-13	Pass



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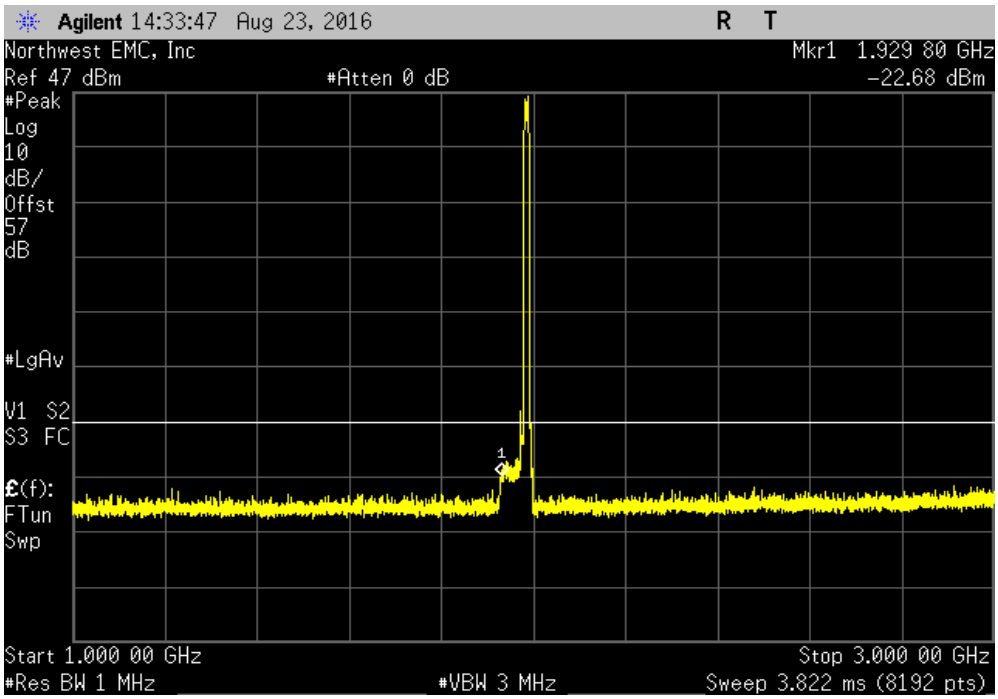
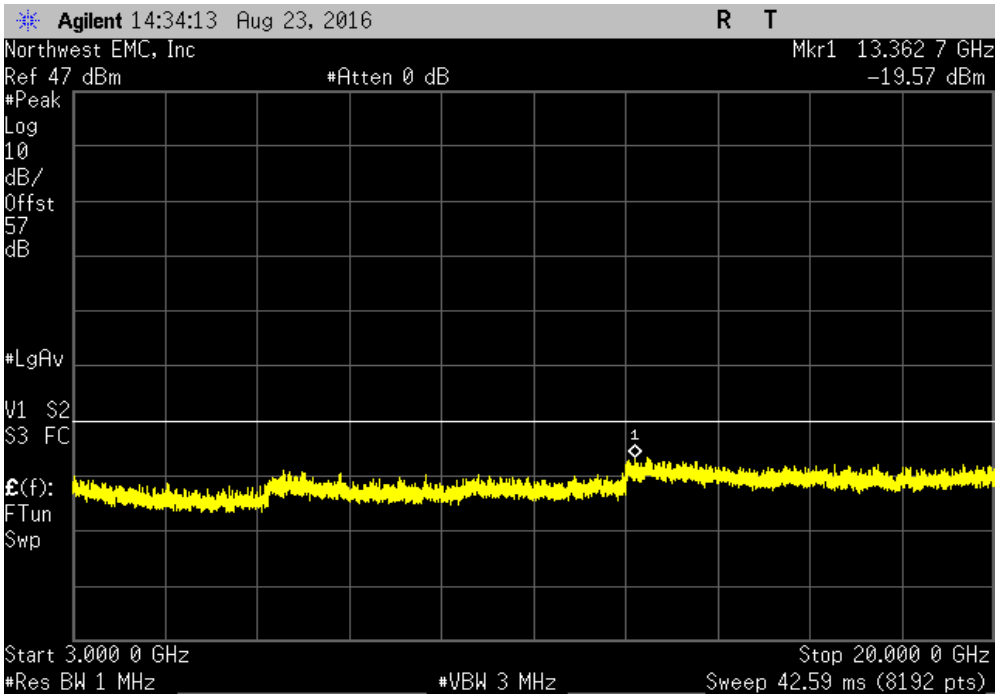
Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.68	-13	Pass



Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.57	-13	Pass



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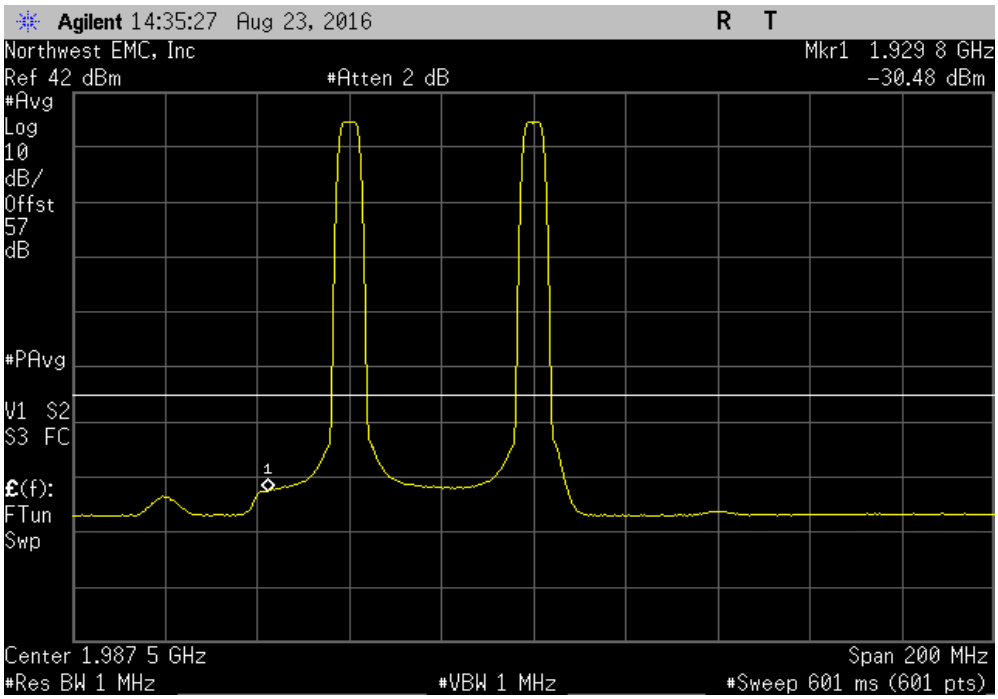
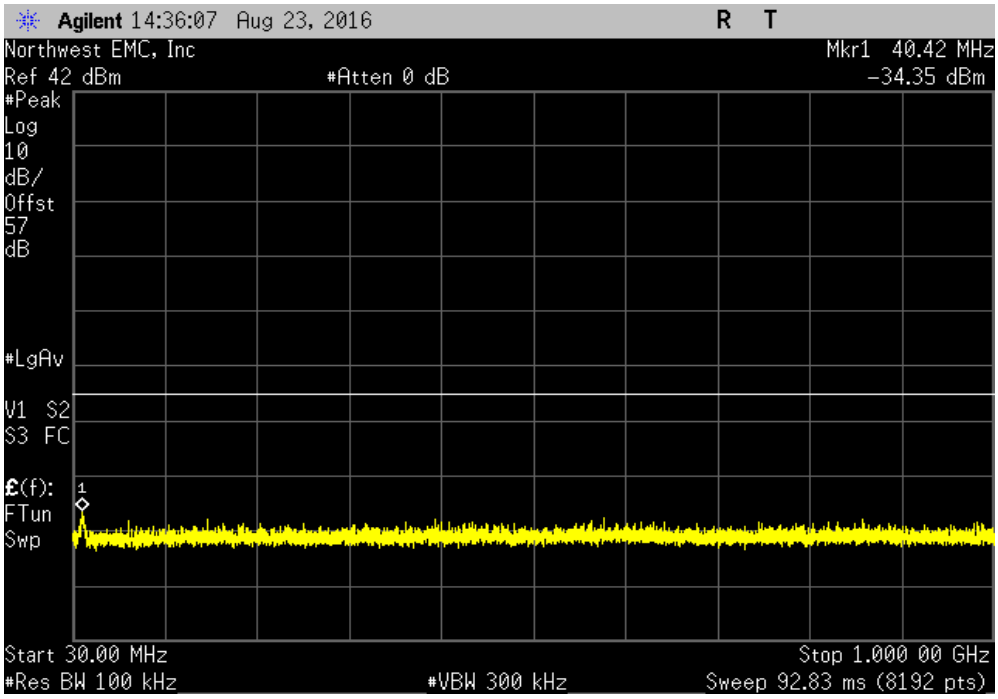
Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.35	-13	Pass



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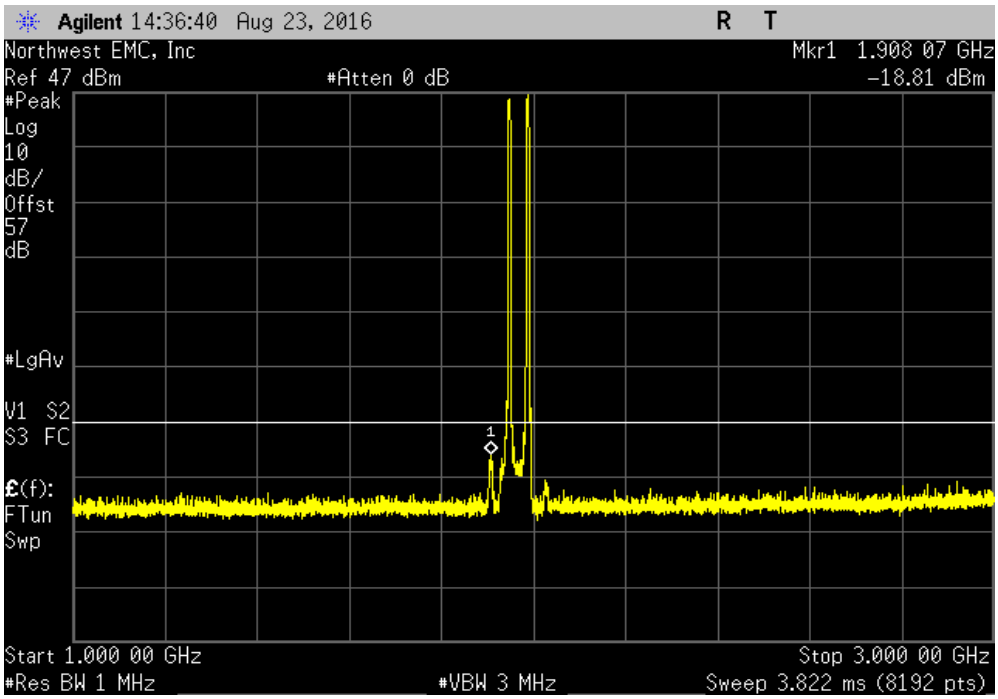
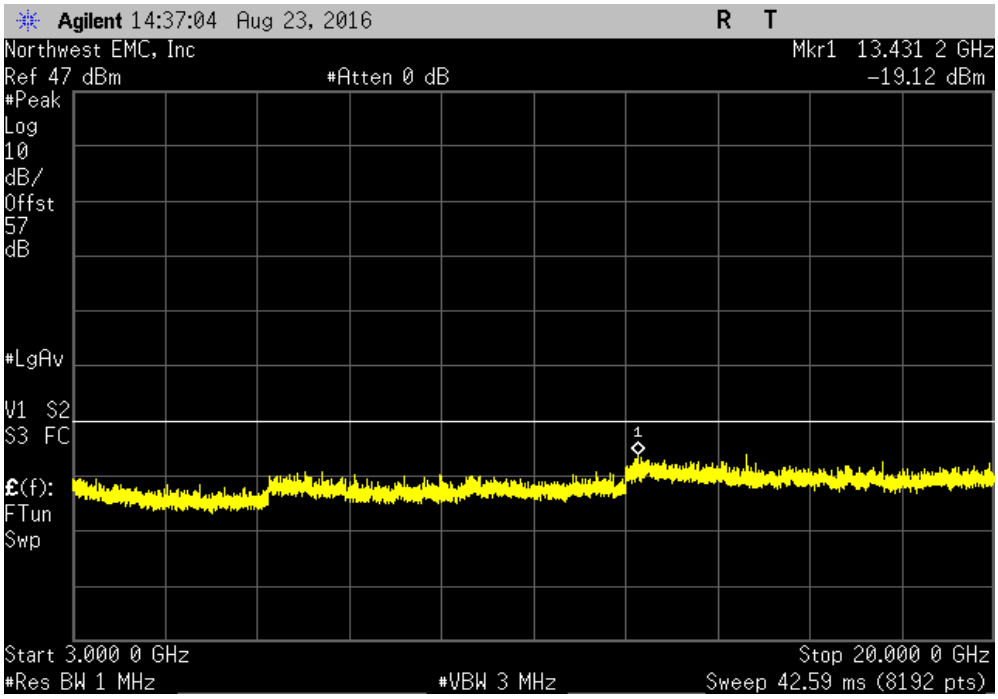
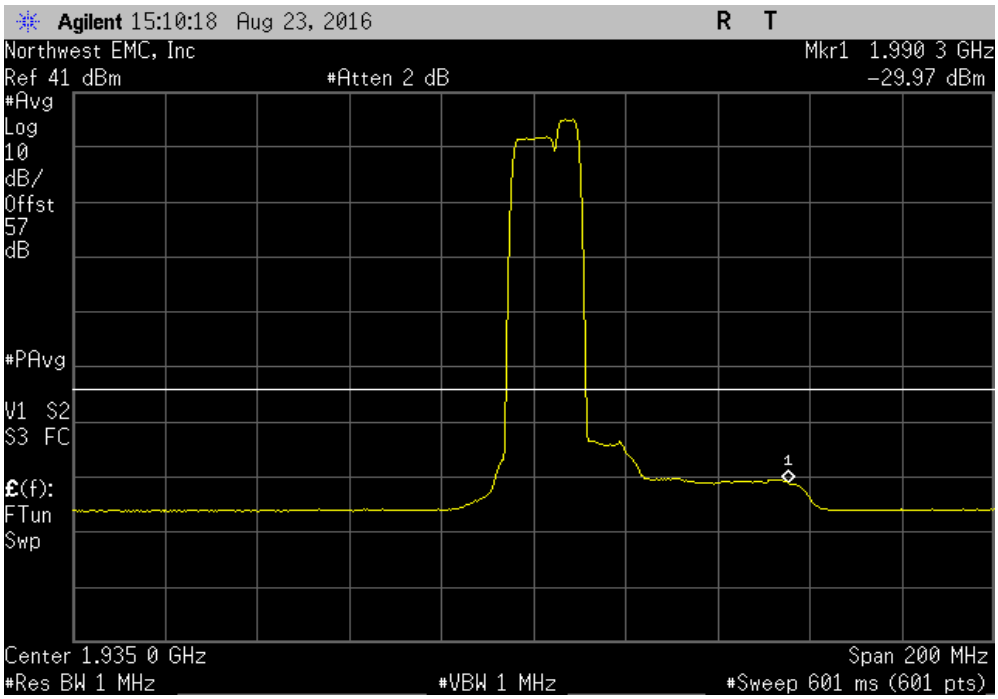
Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-18.81	-13	Pass



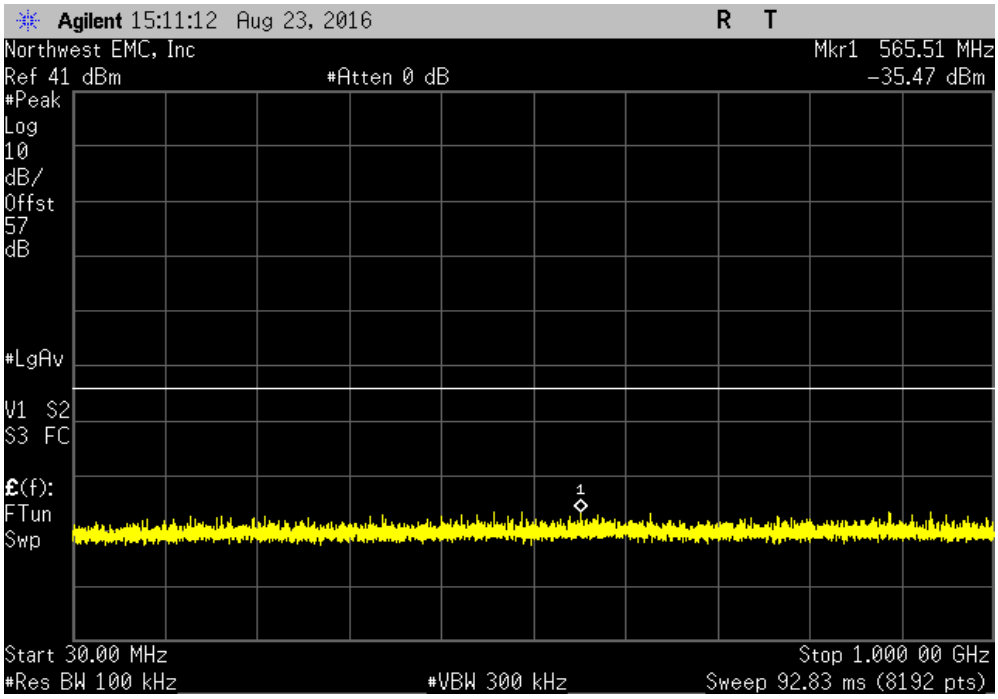
Antenna Port 1, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.12	-13	Pass



Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.48	-13	Pass



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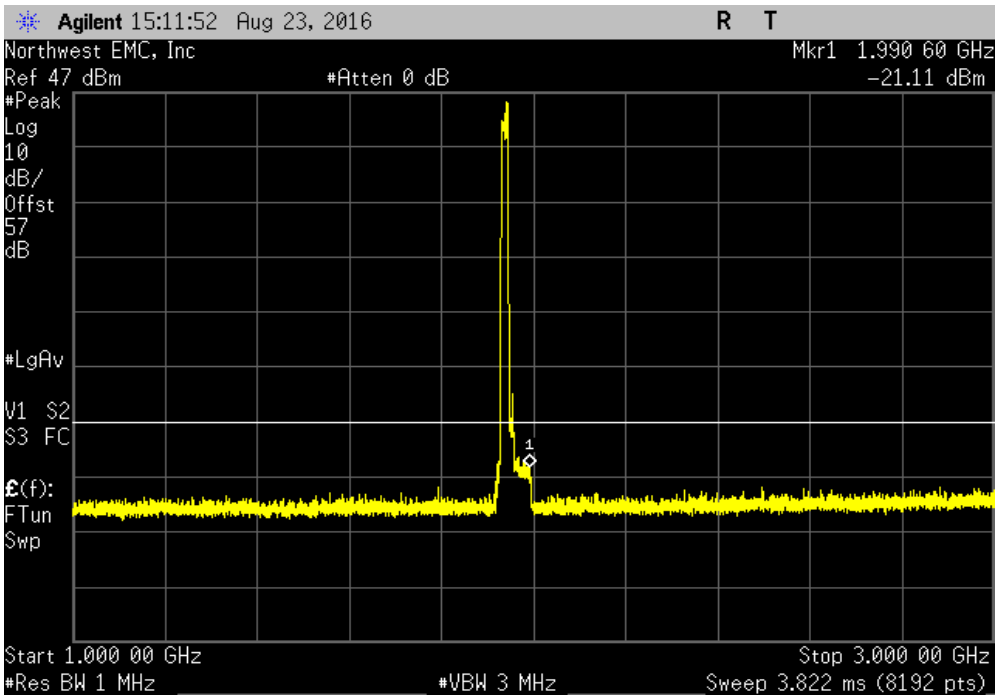
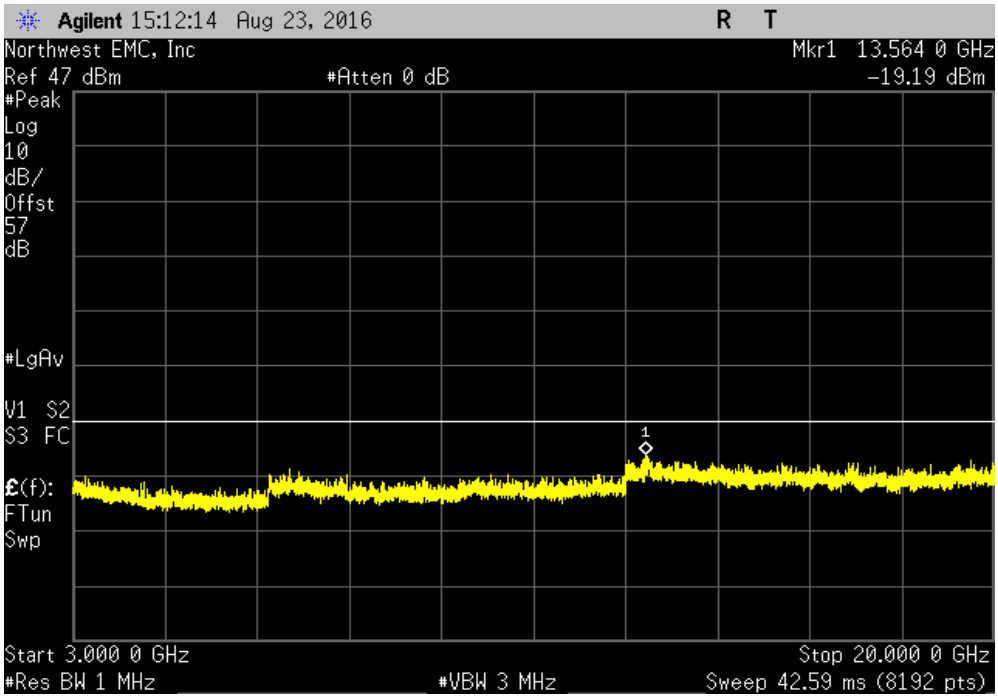
Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.11	-13	Pass



Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.19	-13	Pass



INTERMODULATION - LTE BAND 2

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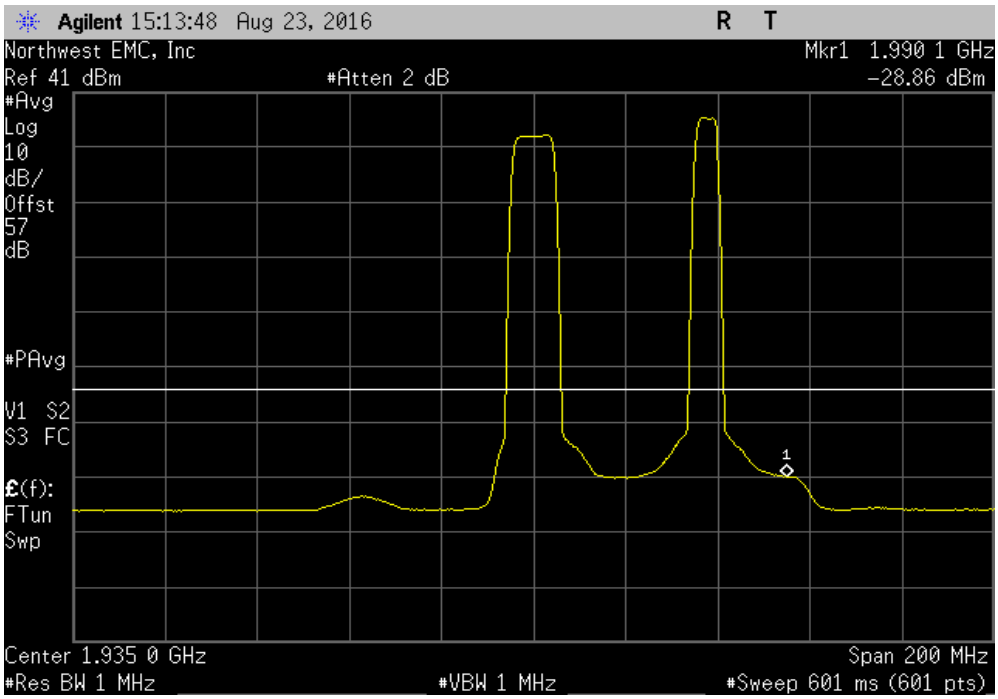
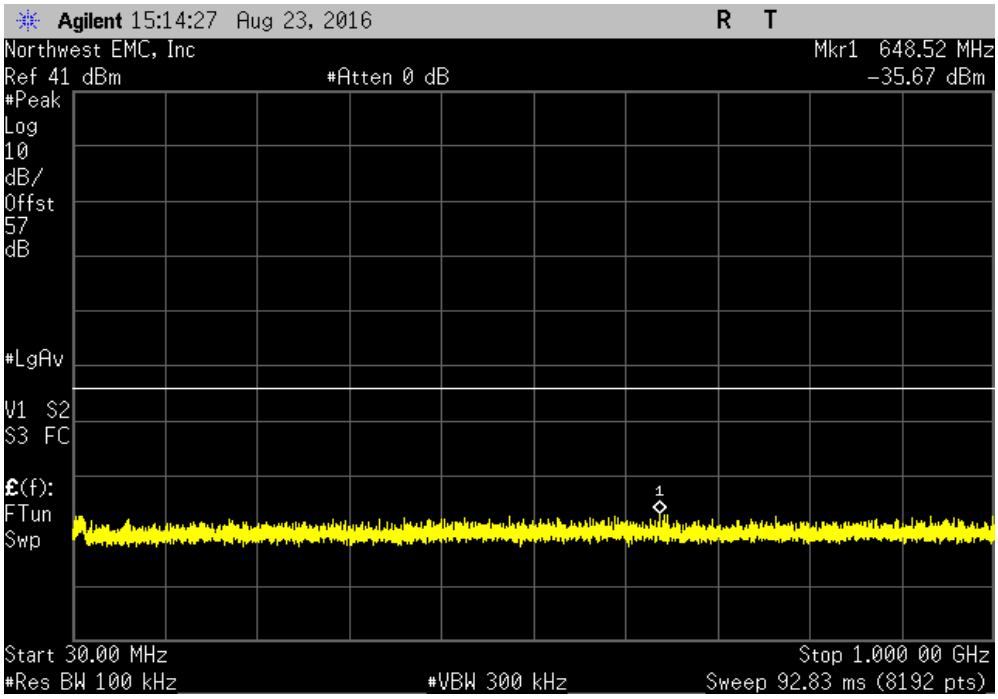
Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.67	-13	Pass



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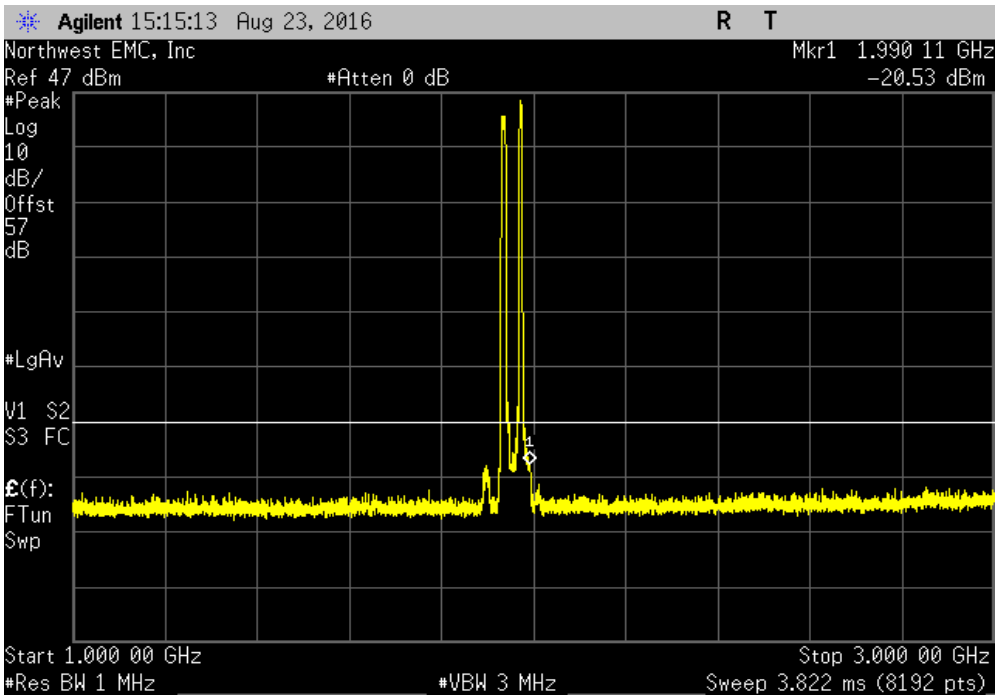
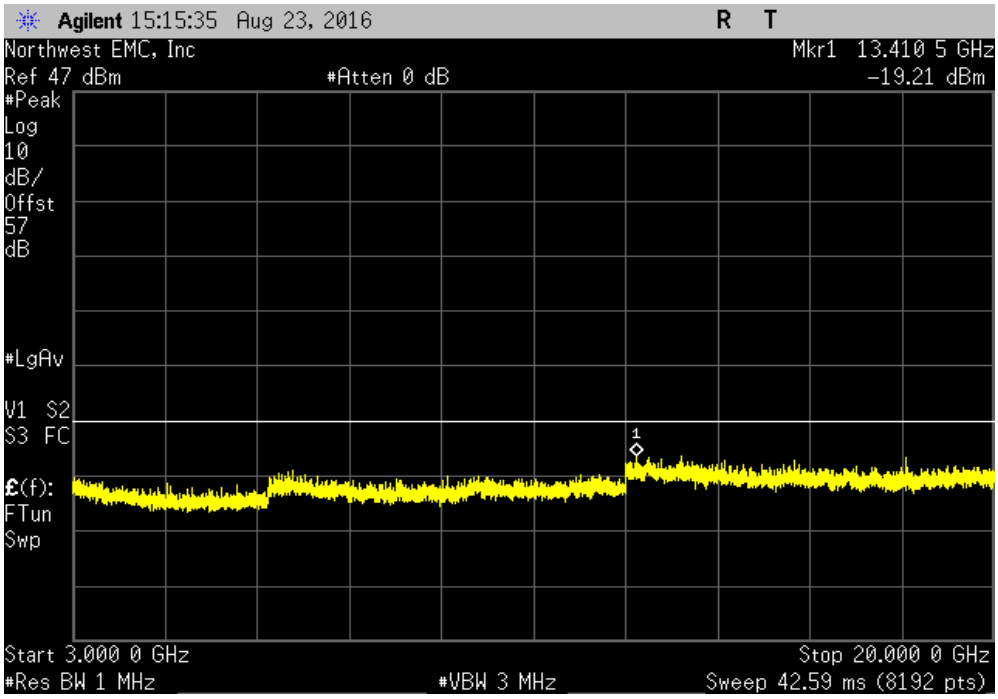
Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.54	-13	Pass



Antenna Port 1, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.21	-13	Pass



INTERMODULATION - LTE BAND 2

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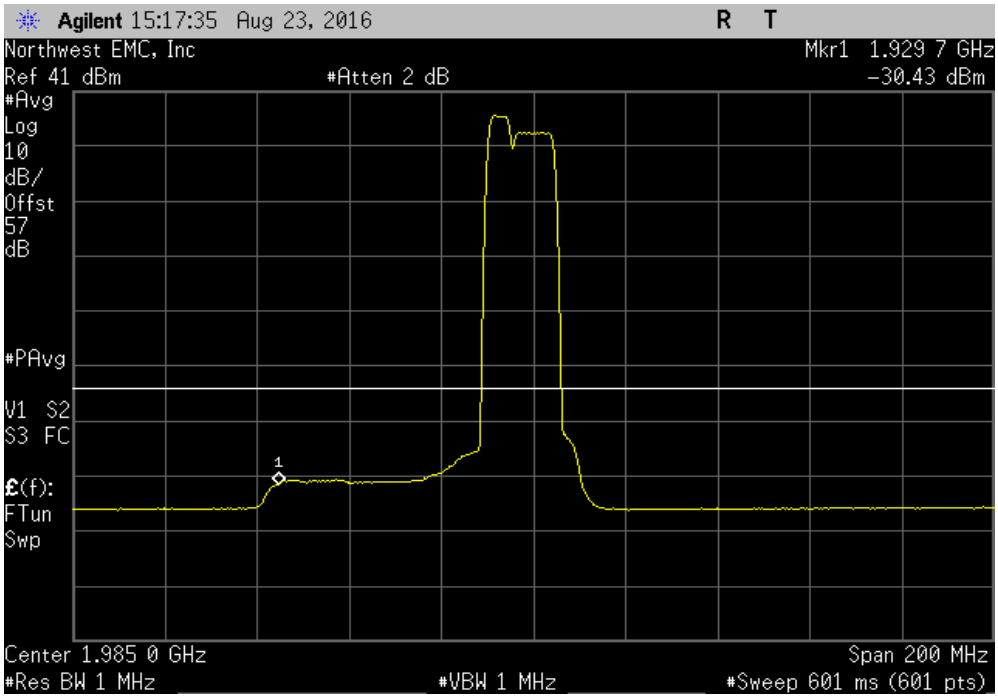
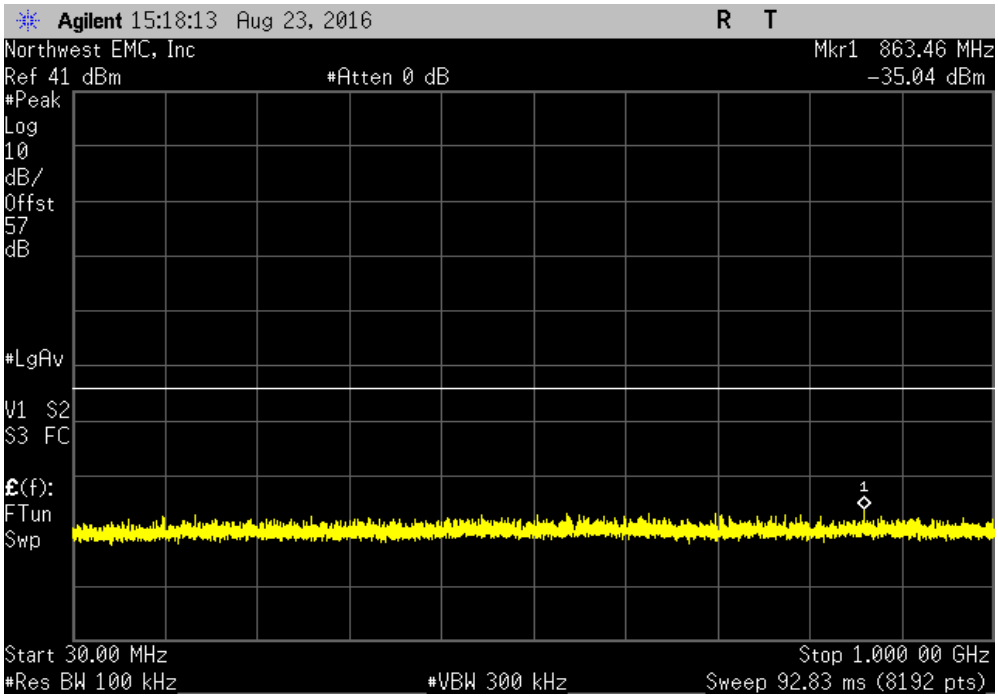
Antenna Port 1, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.04	-13	Pass



INTERMODULATION - LTE BAND 2

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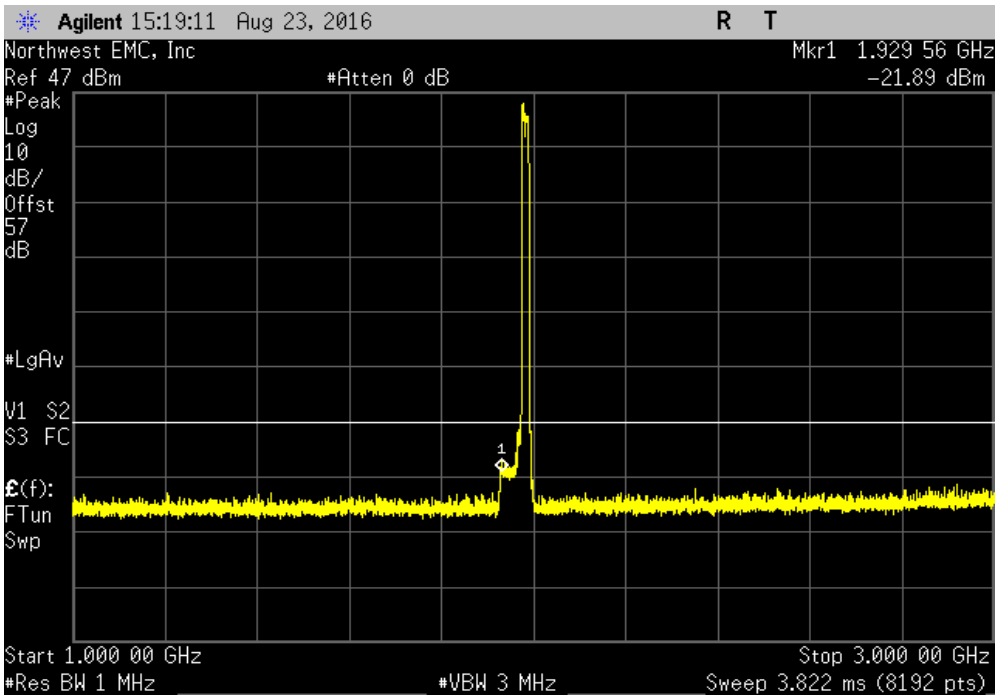
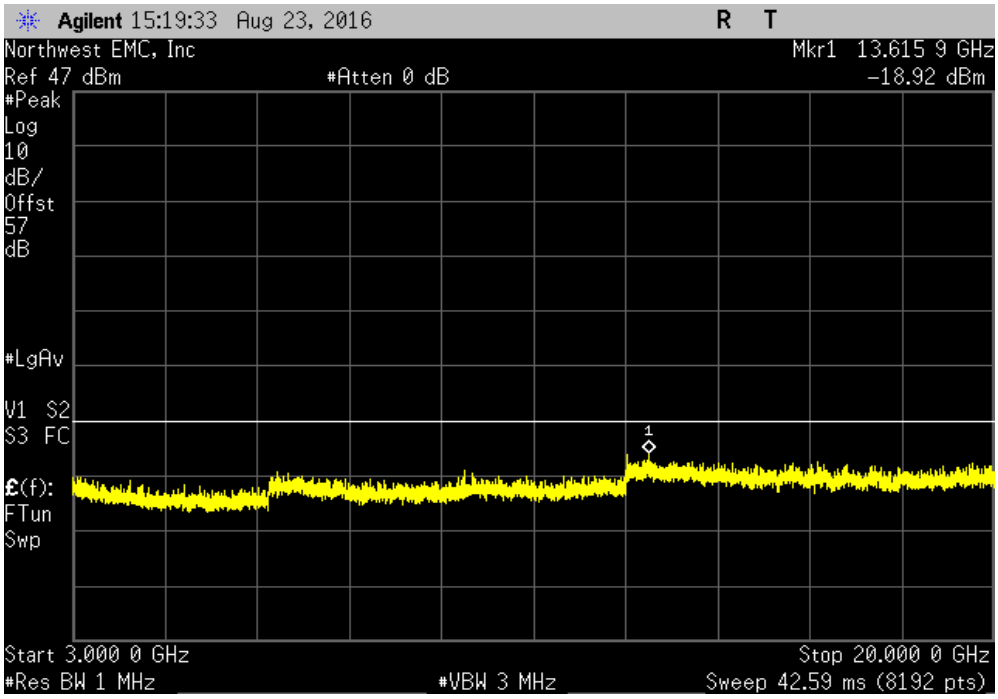
Antenna Port 1, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.89	-13	Pass



Antenna Port 1, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.92	-13	Pass



INTERMODULATION - LTE BAND 2

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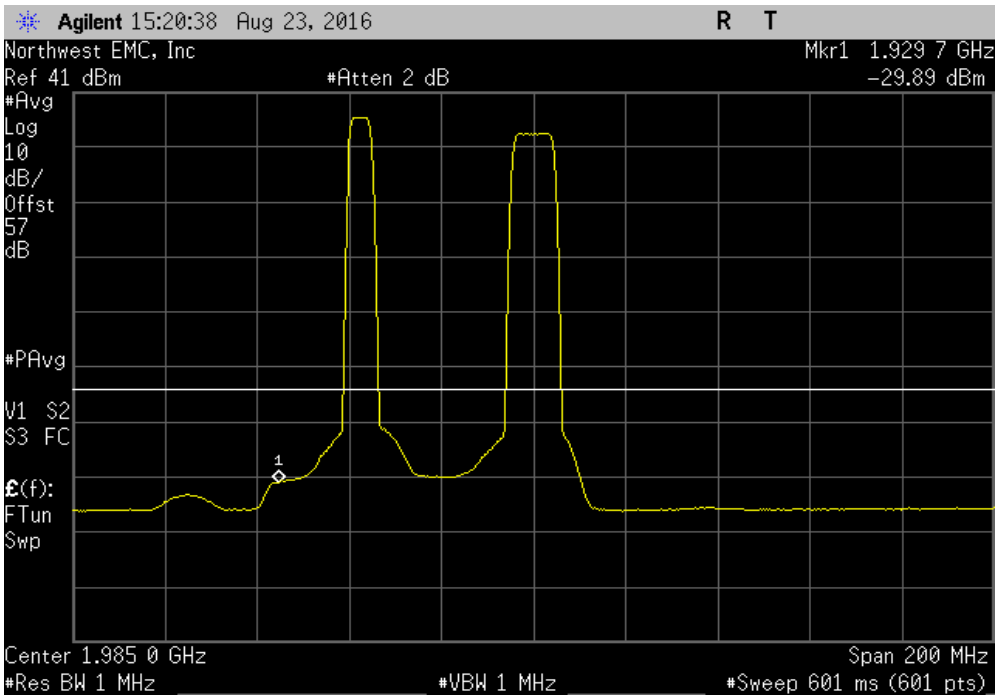
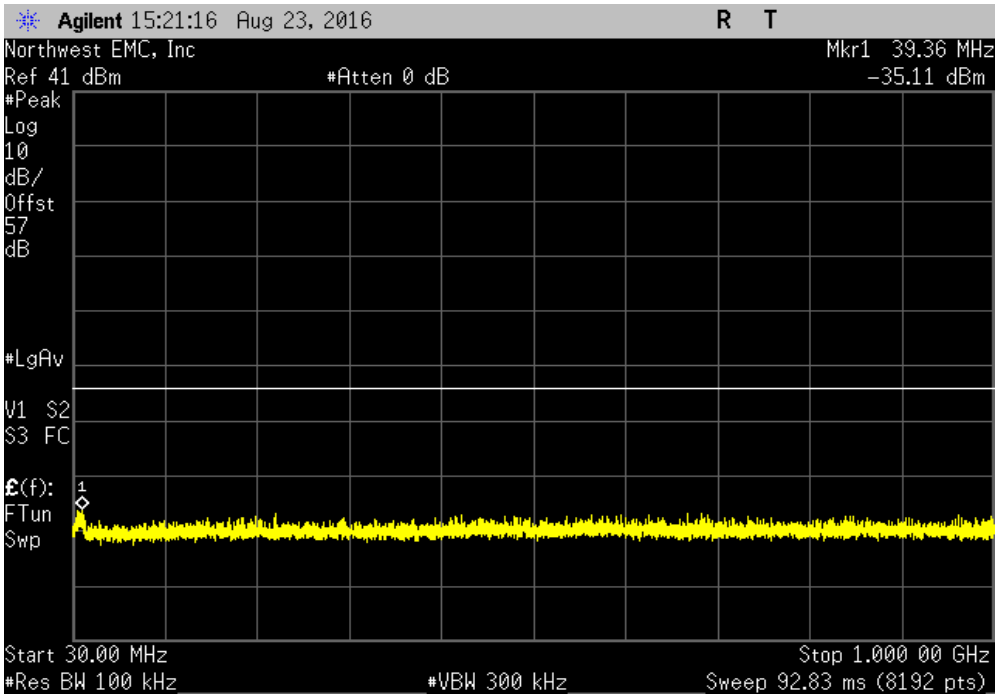
Antenna Port 1, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.11	-13	Pass



INTERMODULATION - LTE BAND 2

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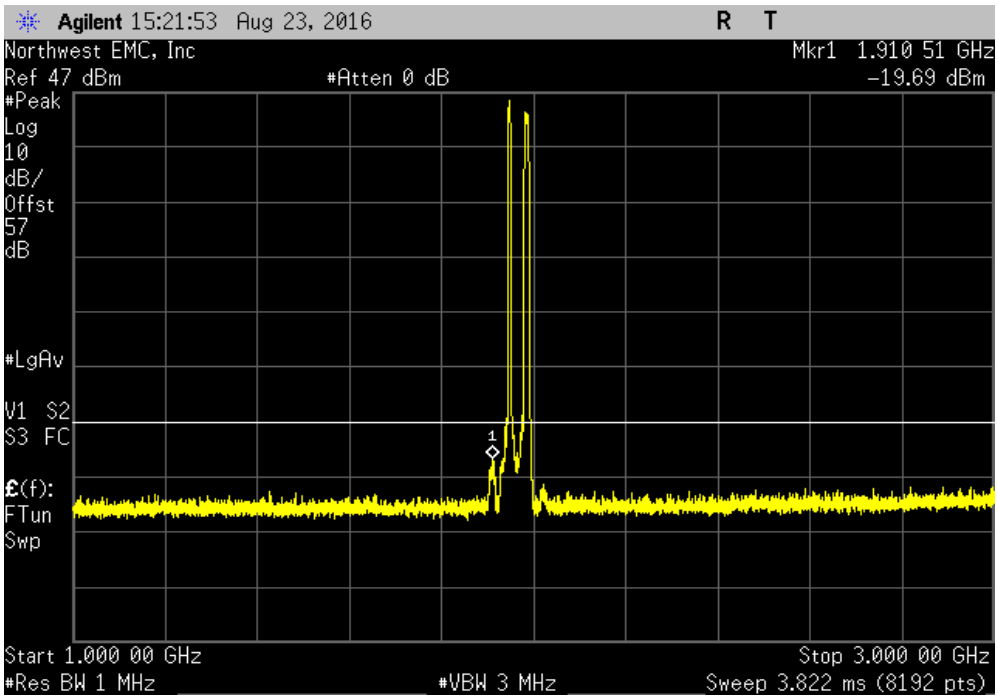
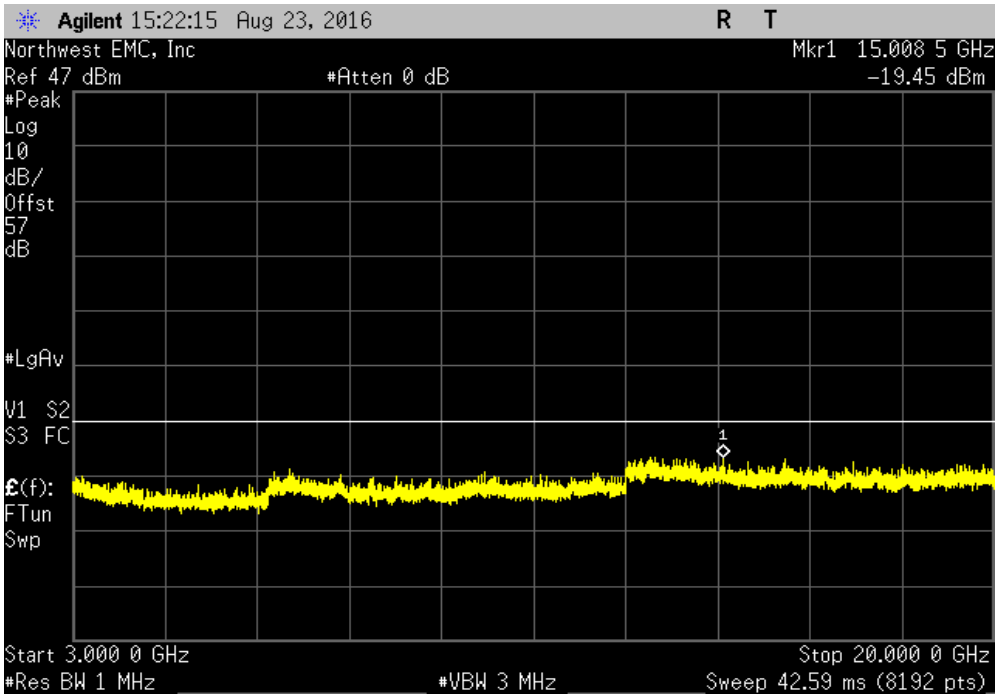
Antenna Port 1, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.70	-13	Pass



Antenna Port 1, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.45	-13	Pass



INTERMODULATION - LTE BAND 2

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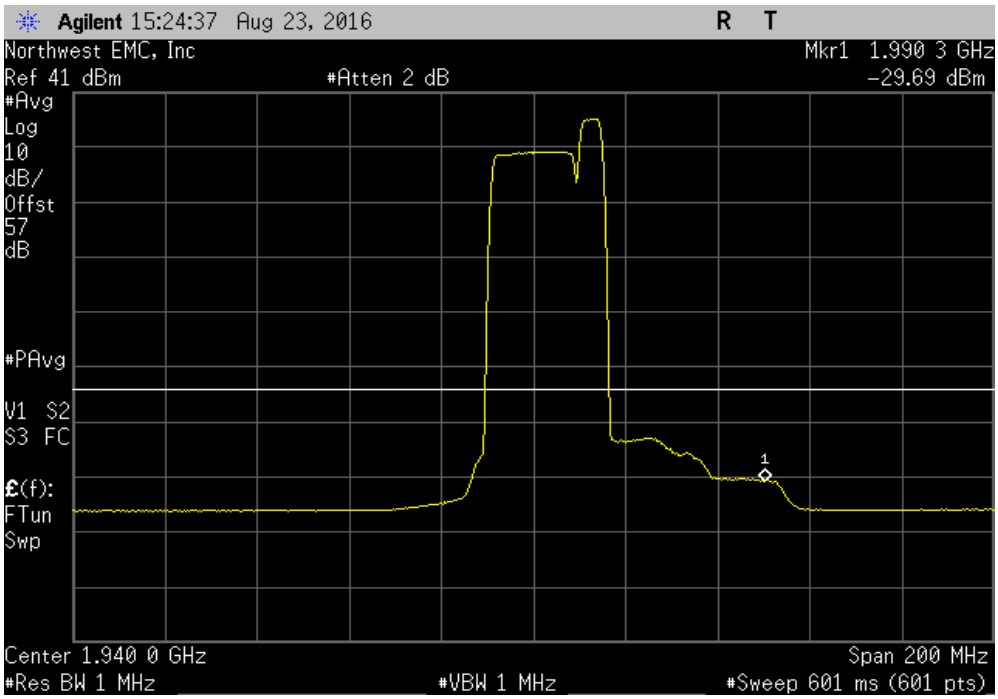
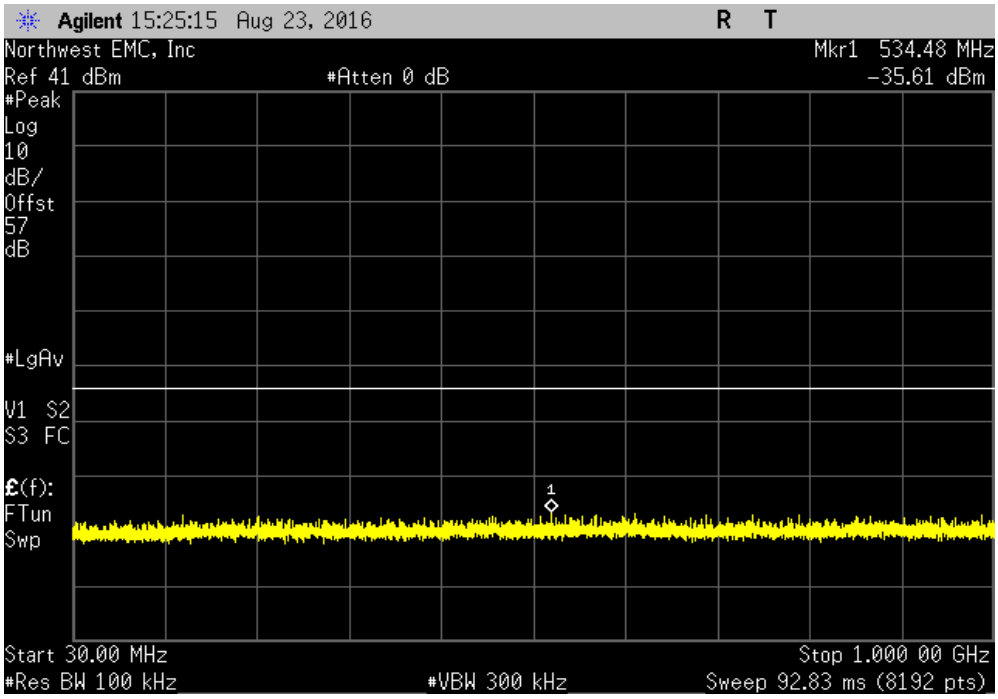
Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.61	-13	Pass



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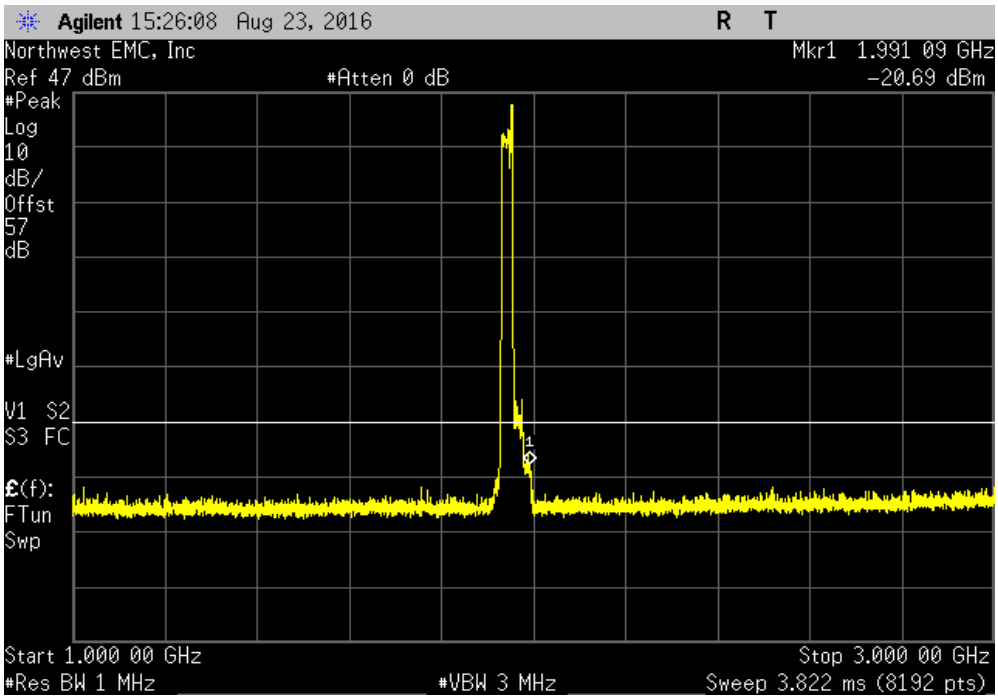
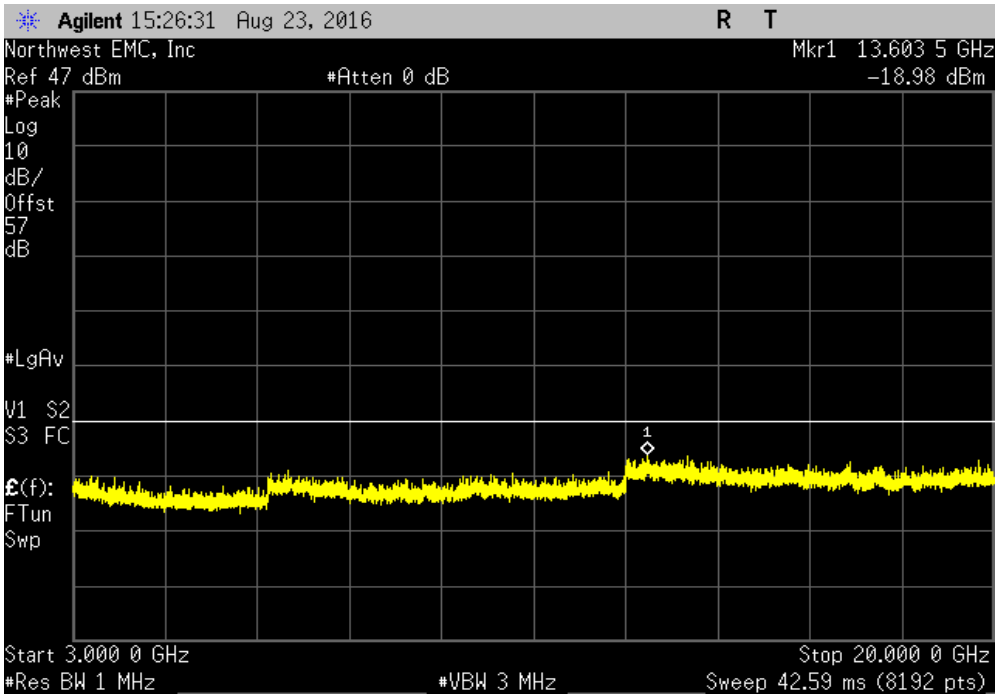
Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.69	-13	Pass



Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.98	-13	Pass



INTERMODULATION - LTE BAND 2

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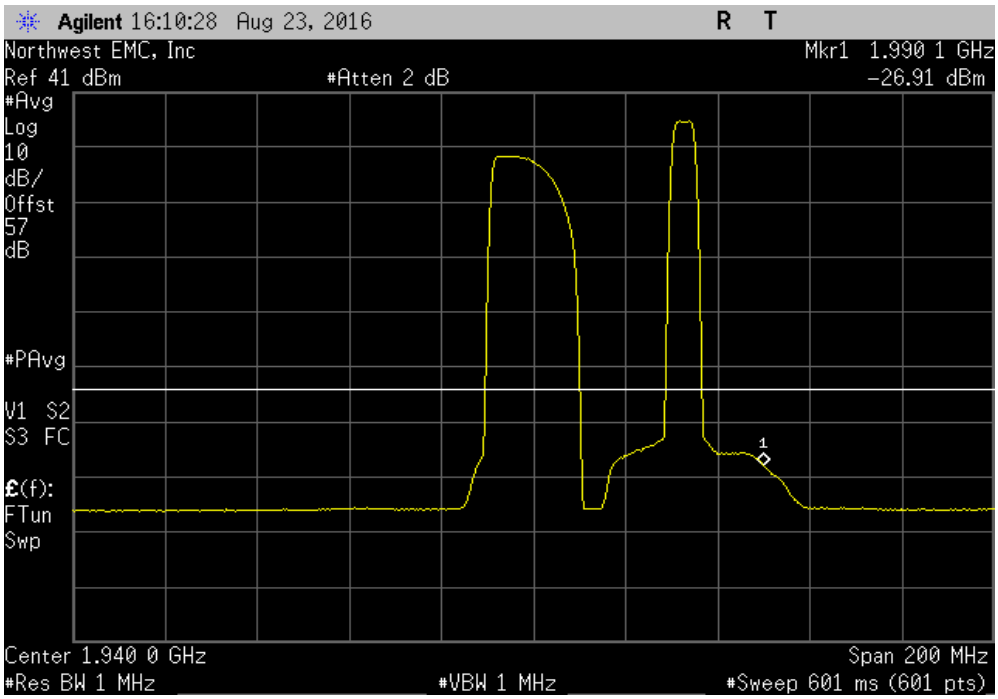
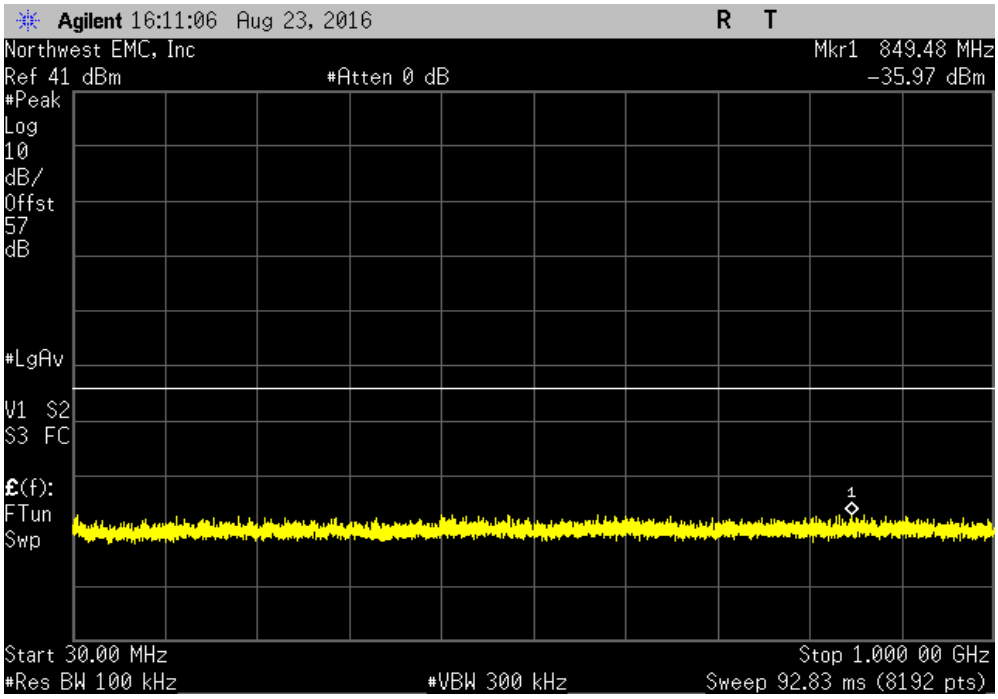
Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.97	-13	Pass



INTERMODULATION - LTE BAND 2

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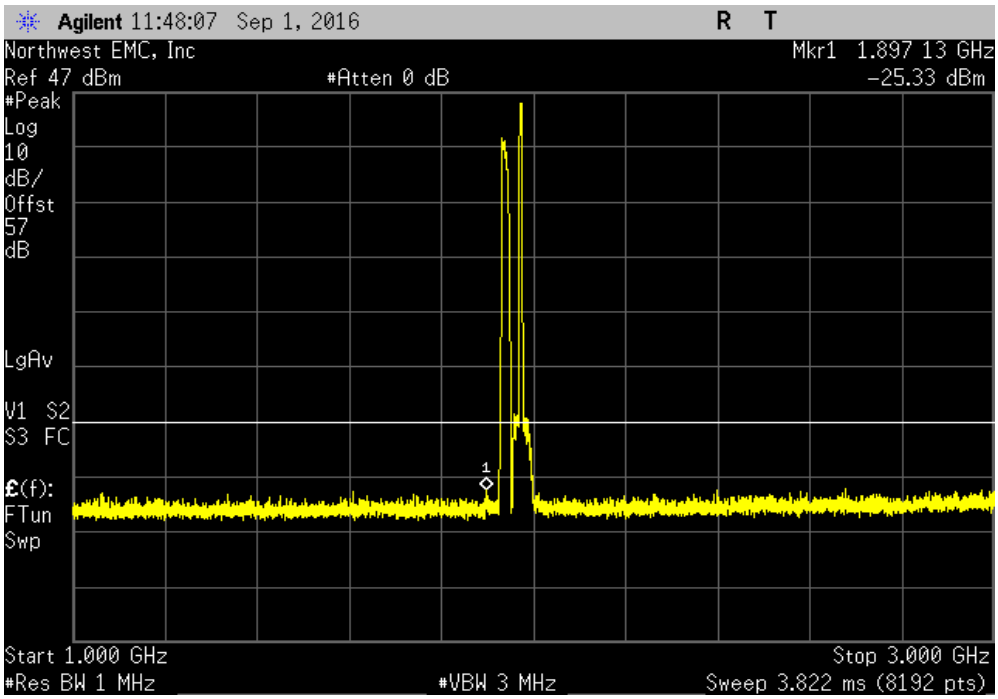
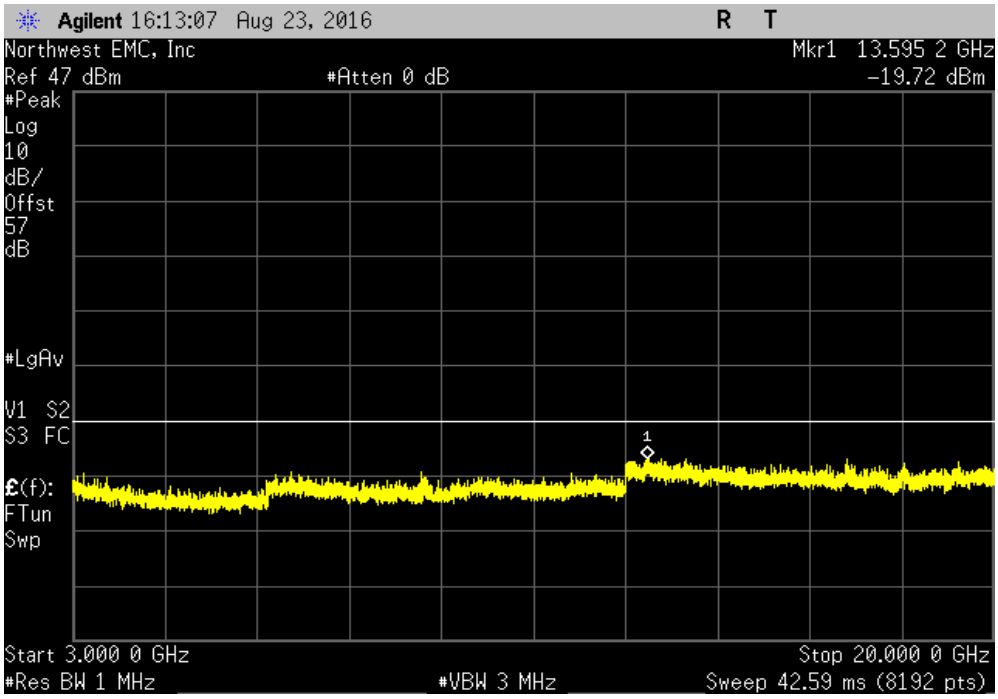
Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-25.33	-13	Pass



Antenna Port 1, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.72	-13	Pass



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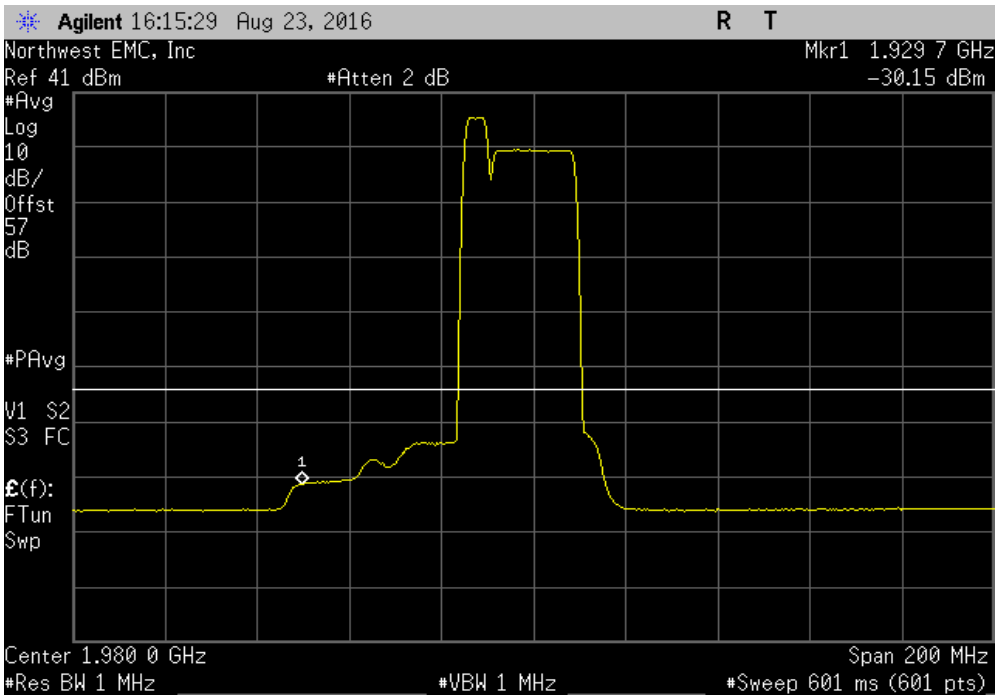
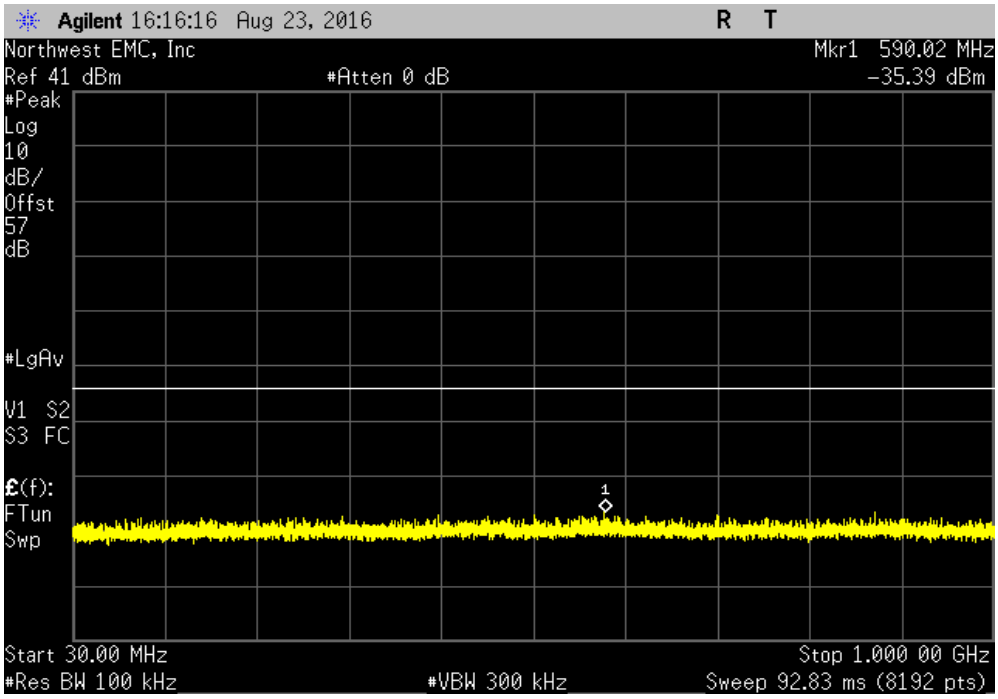
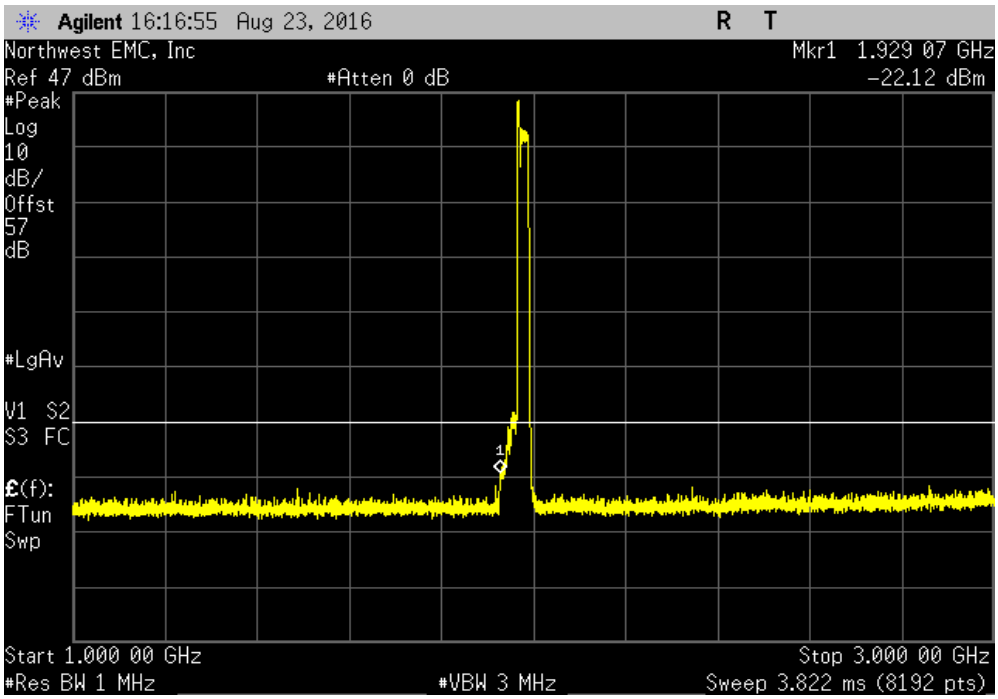
Antenna Port 1, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



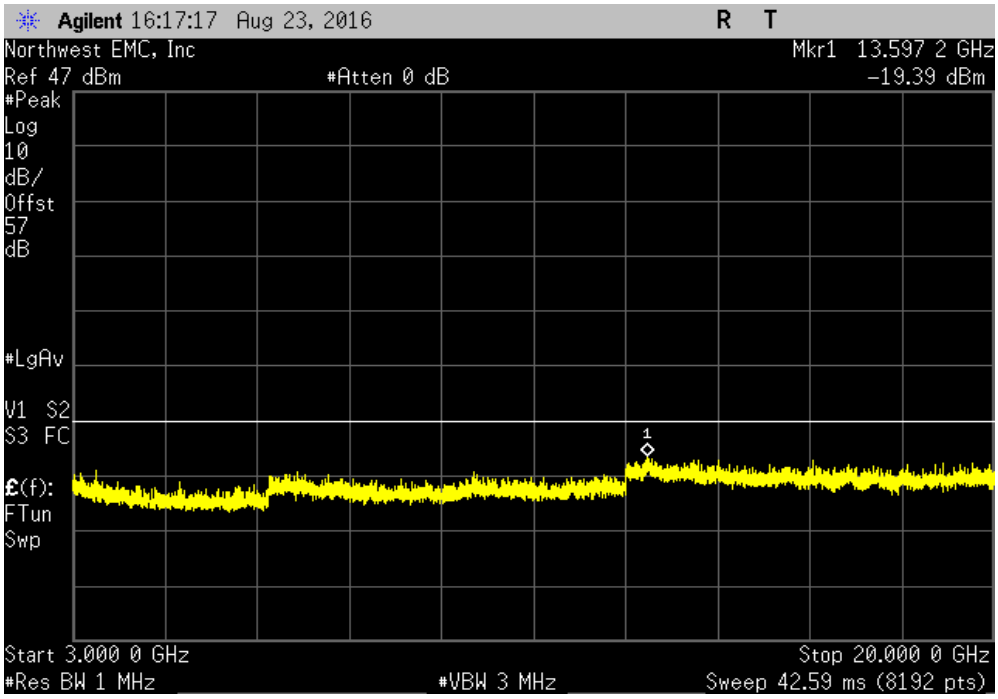
Antenna Port 1, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.39	-13	Pass



Antenna Port 1, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.12	-13	Pass



Antenna Port 1, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.39	-13	Pass



INTERMODULATION - LTE BAND 2

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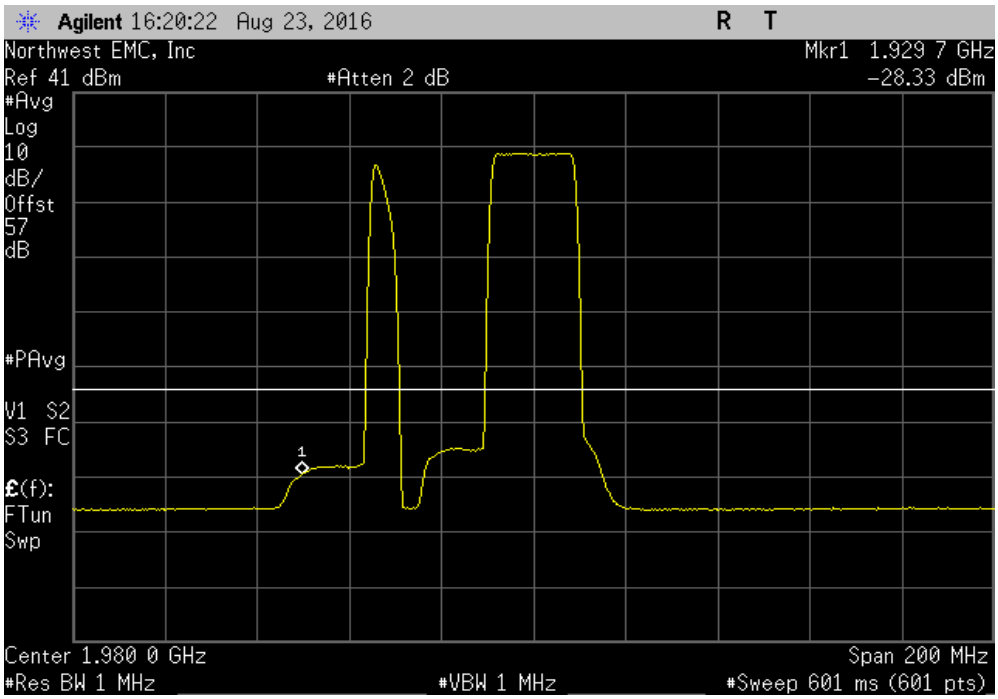
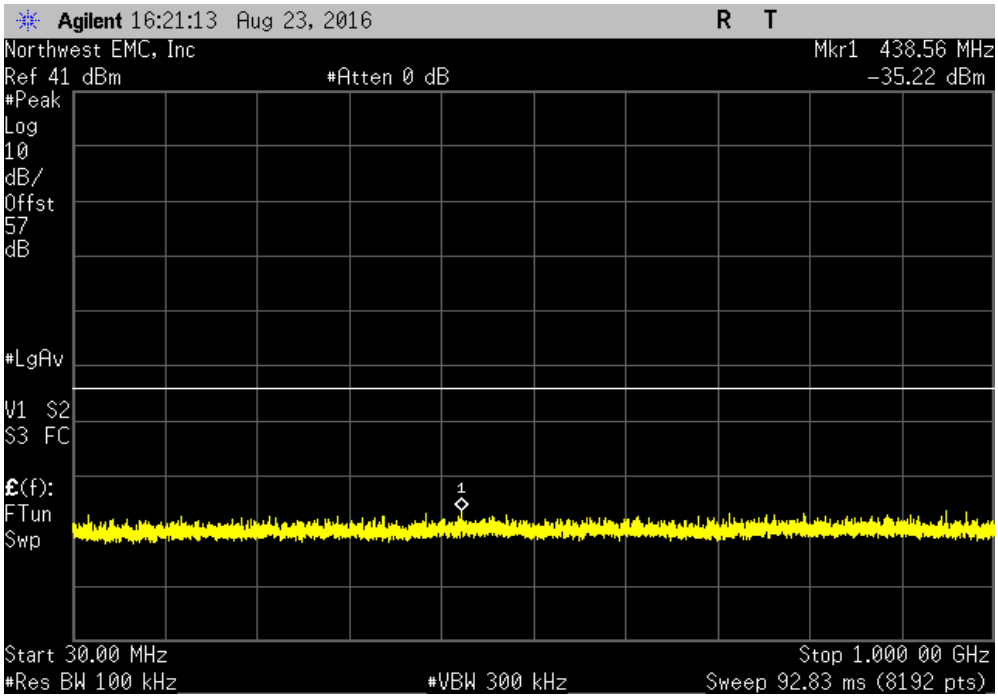
Antenna Port 1, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.22	-13	Pass



INTERMODULATION - LTE BAND 2

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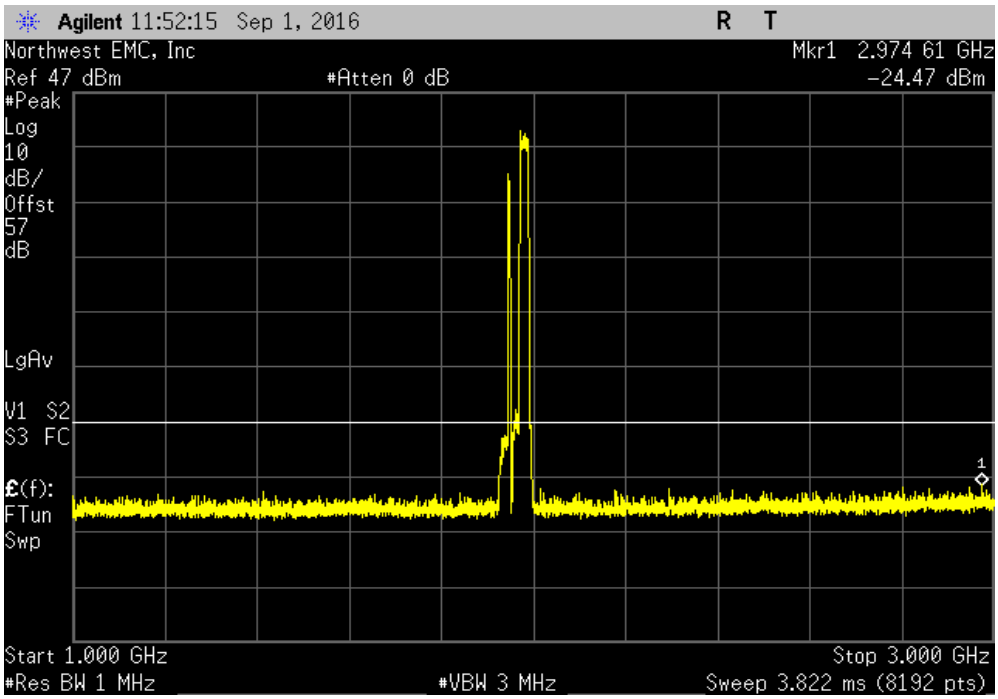
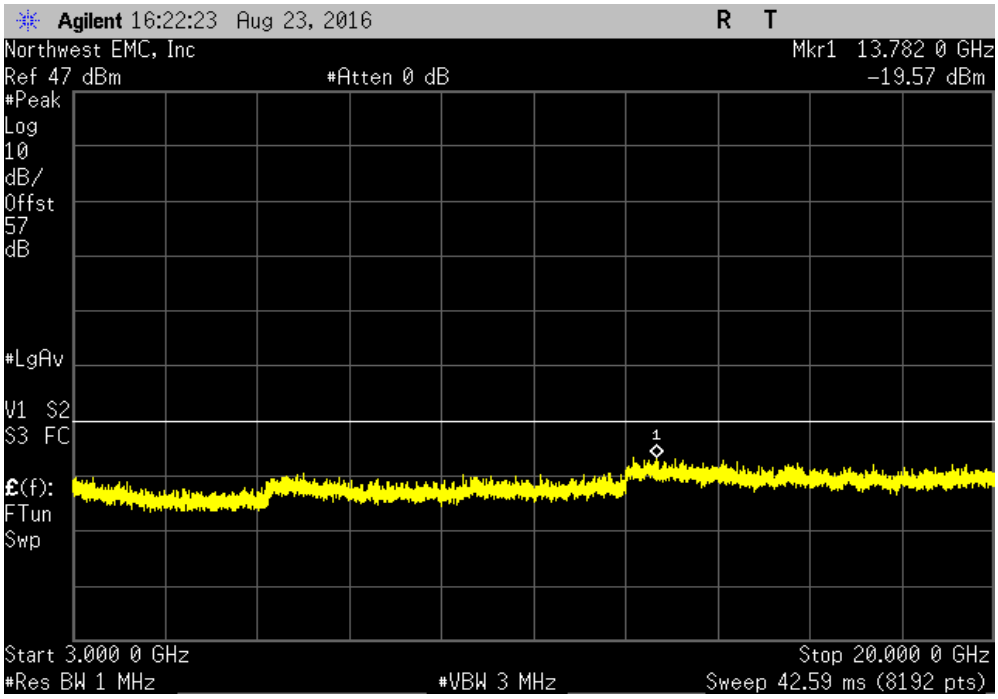
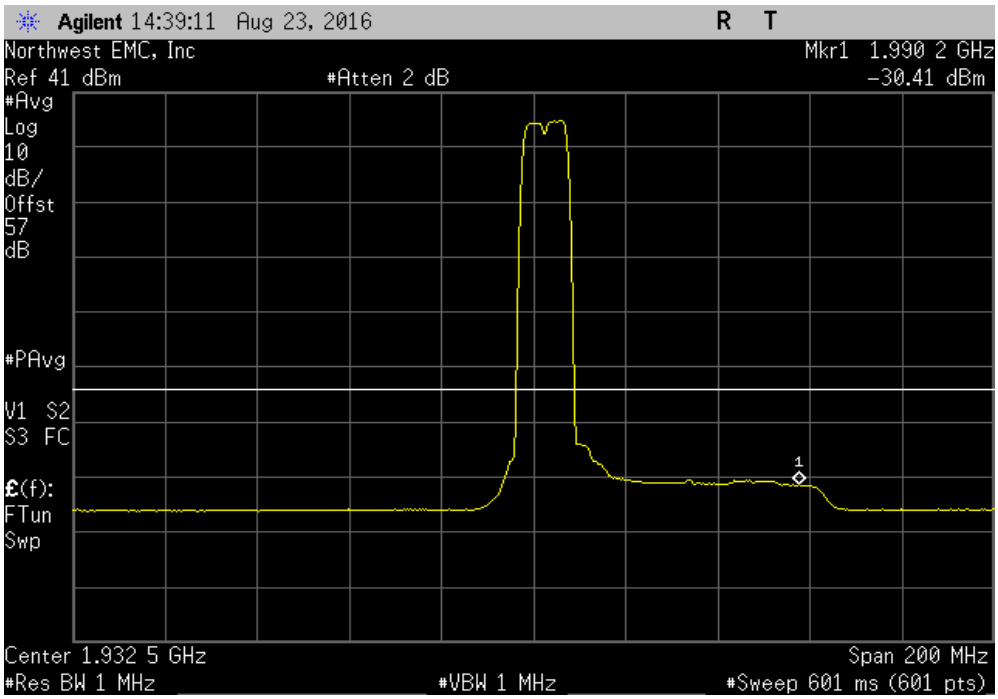
Antenna Port 1, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-24.47	-13	Pass



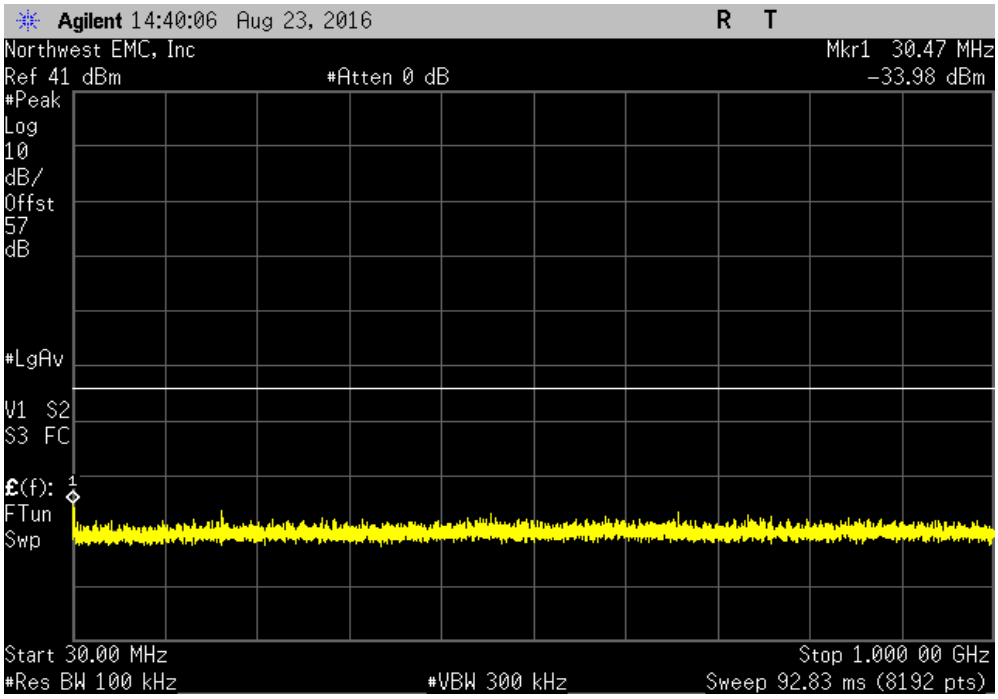
Antenna Port 1, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.57	-13	Pass



Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.98	-13	Pass



INTERMODULATION - LTE BAND 2

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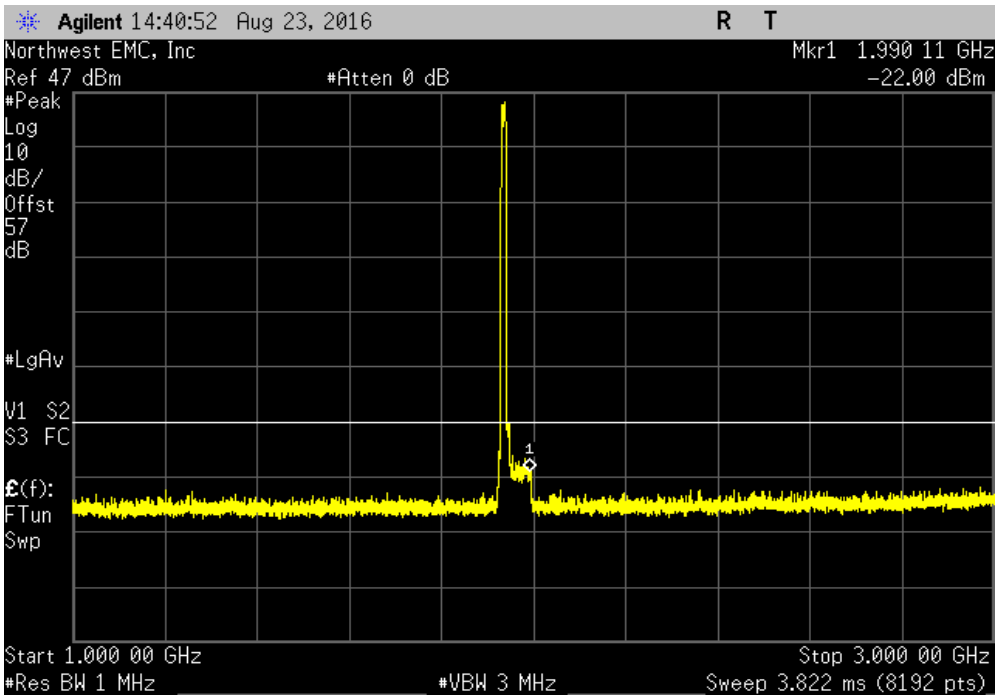
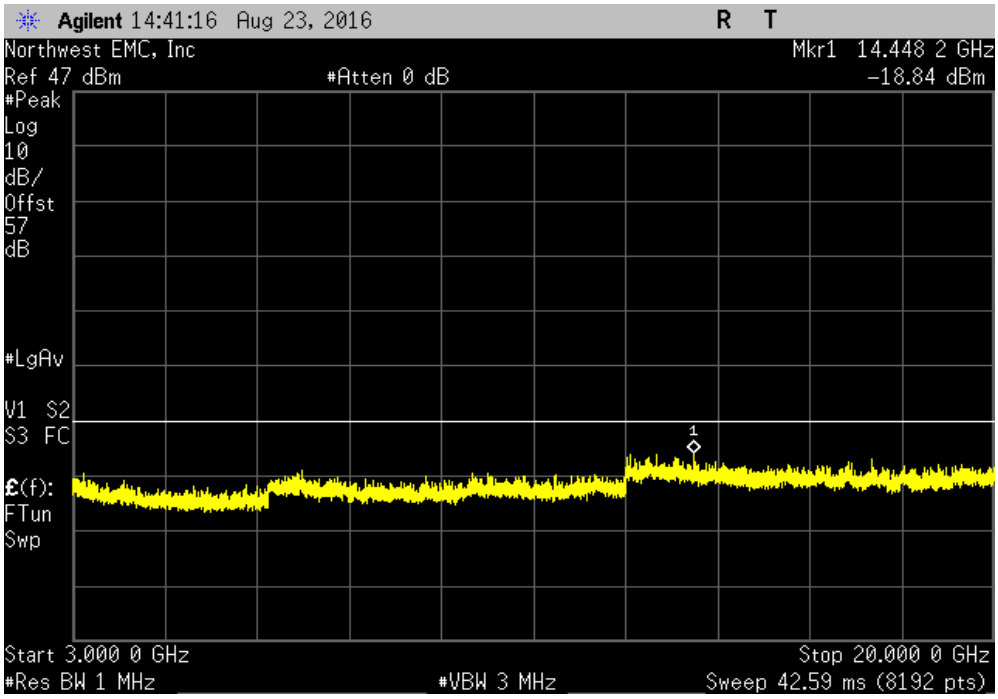
Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.00	-13	Pass



Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.84	-13	Pass



INTERMODULATION - LTE BAND 2

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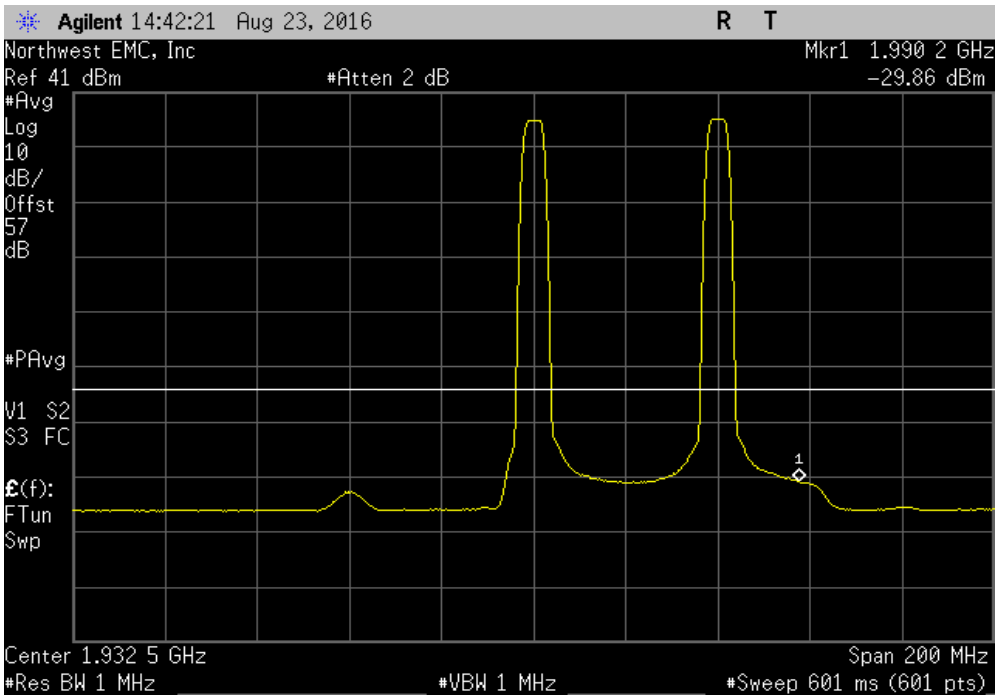
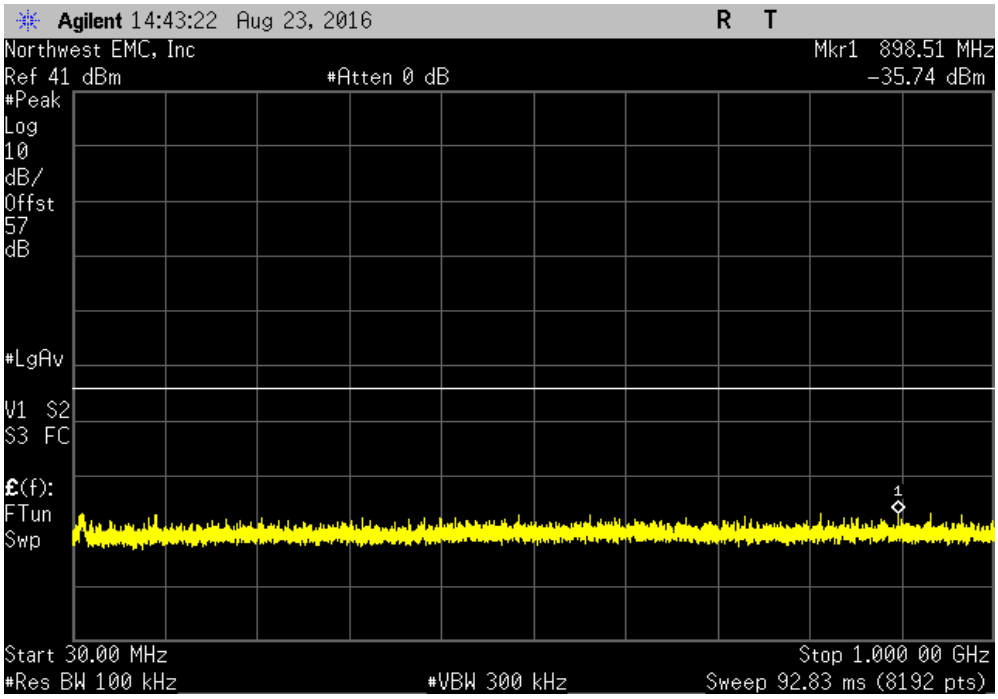
Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.74	-13	Pass



INTERMODULATION - LTE BAND 2

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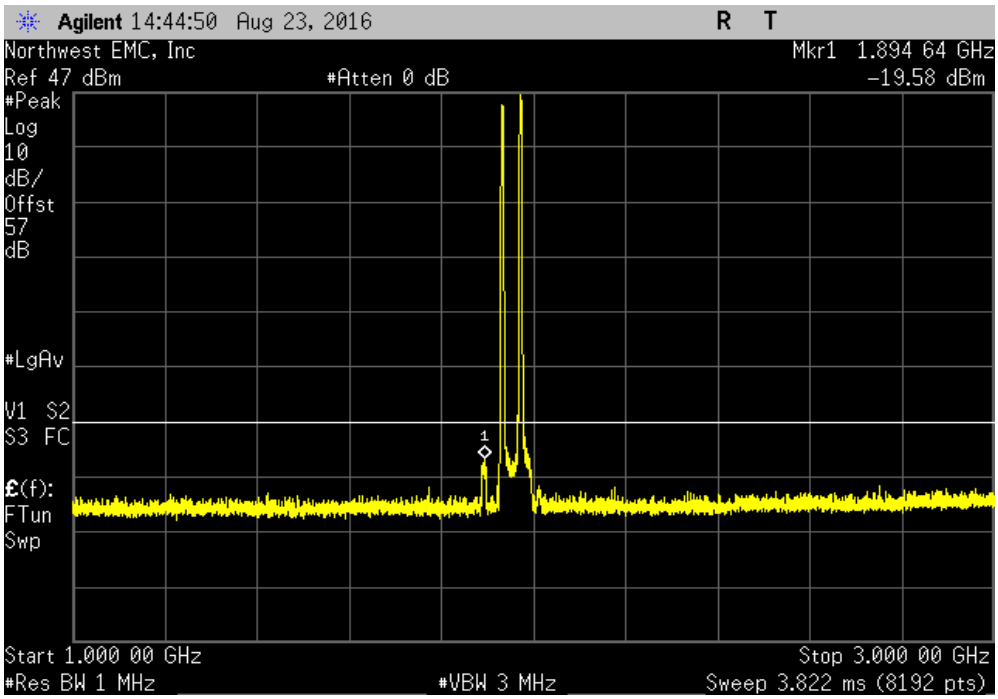
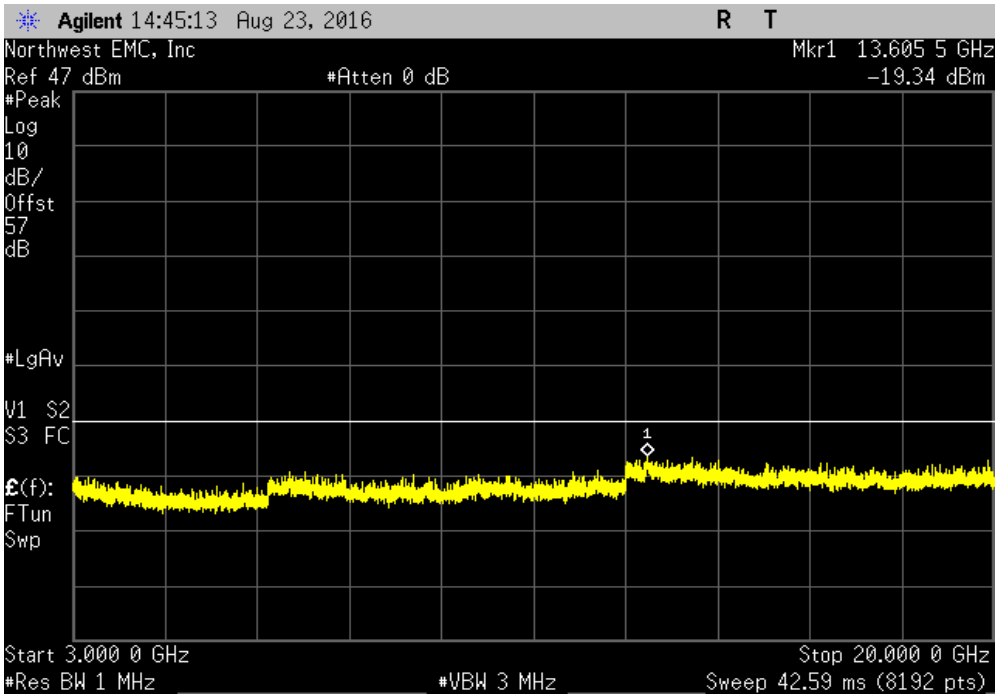
Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.59	-13	Pass



Antenna Port 2, LTE5, 1932.5 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.34	-13	Pass



INTERMODULATION - LTE BAND 2

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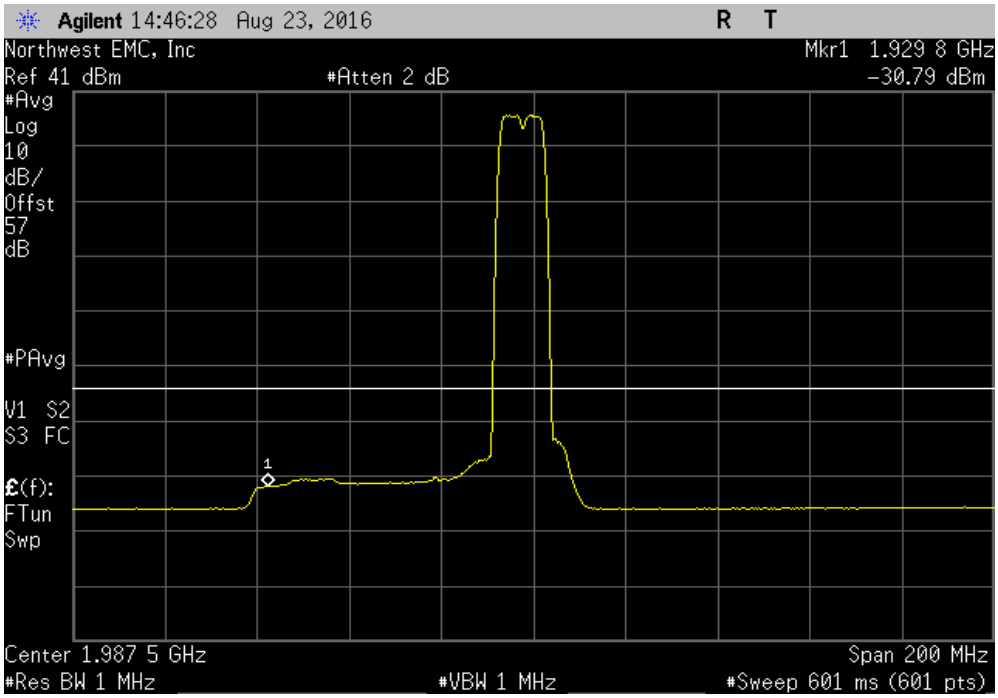
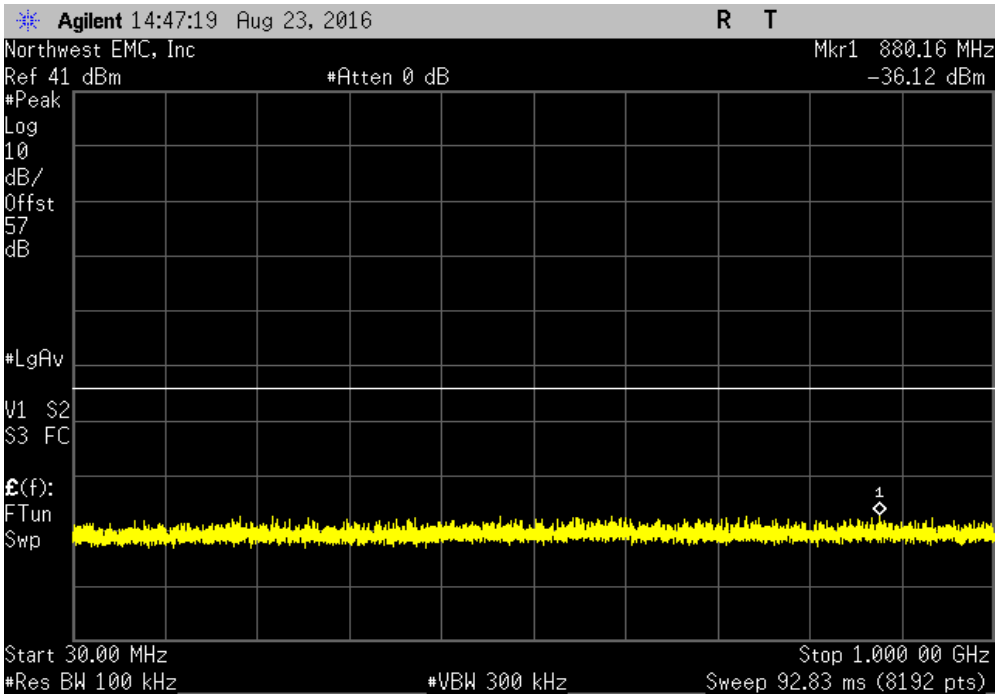
Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-36.12	-13	Pass



INTERMODULATION - LTE BAND 2

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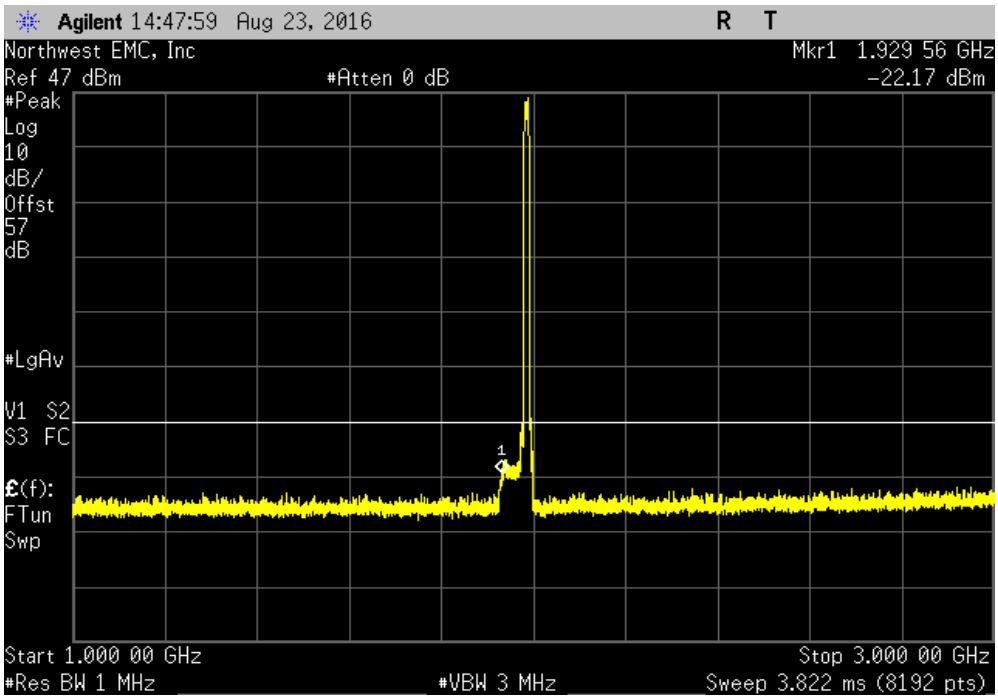
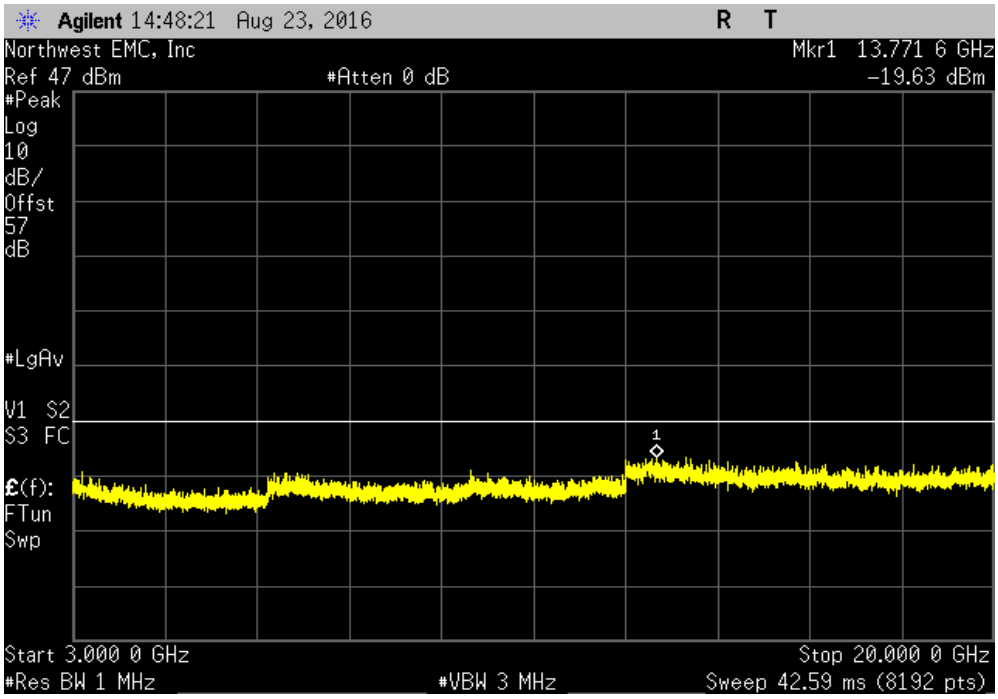
Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.17	-13	Pass



Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.63	-13	Pass



INTERMODULATION - LTE BAND 2

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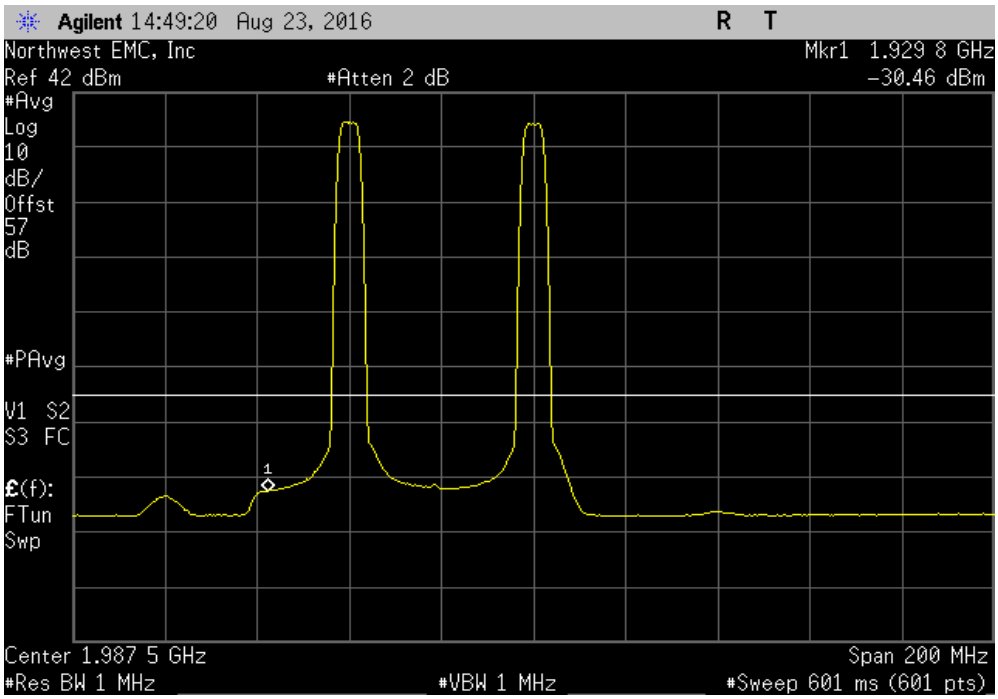
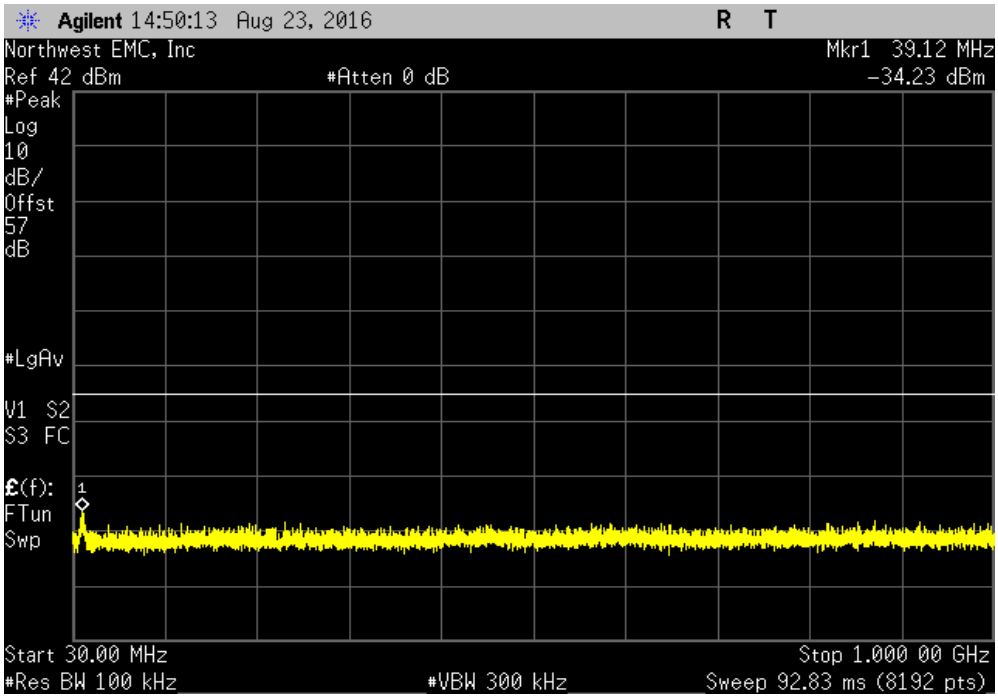
Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.23	-13	Pass



INTERMODULATION - LTE BAND 2

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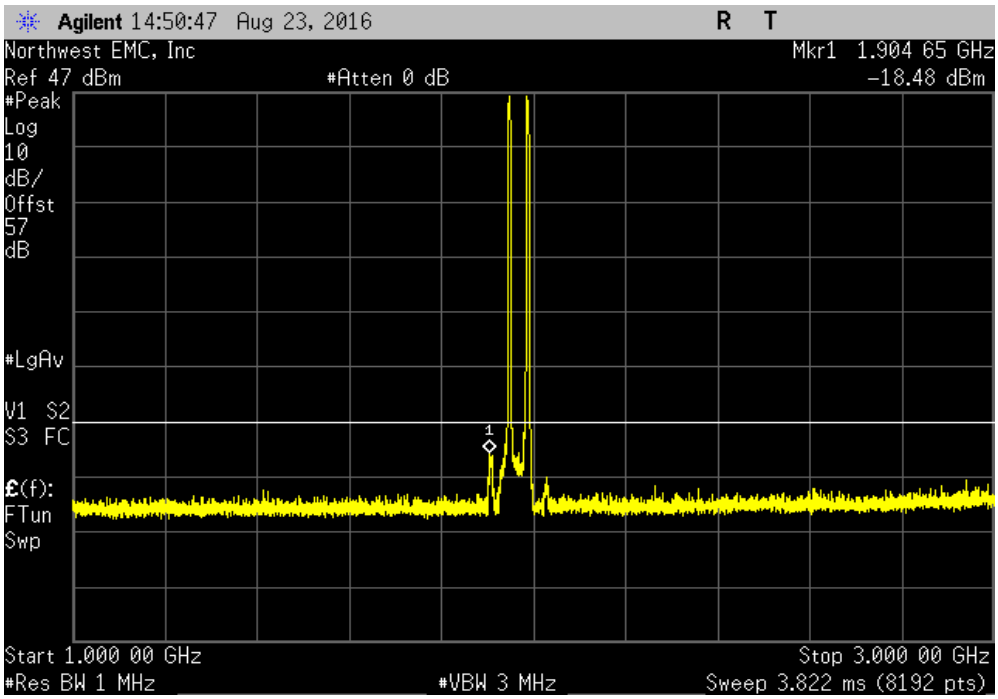
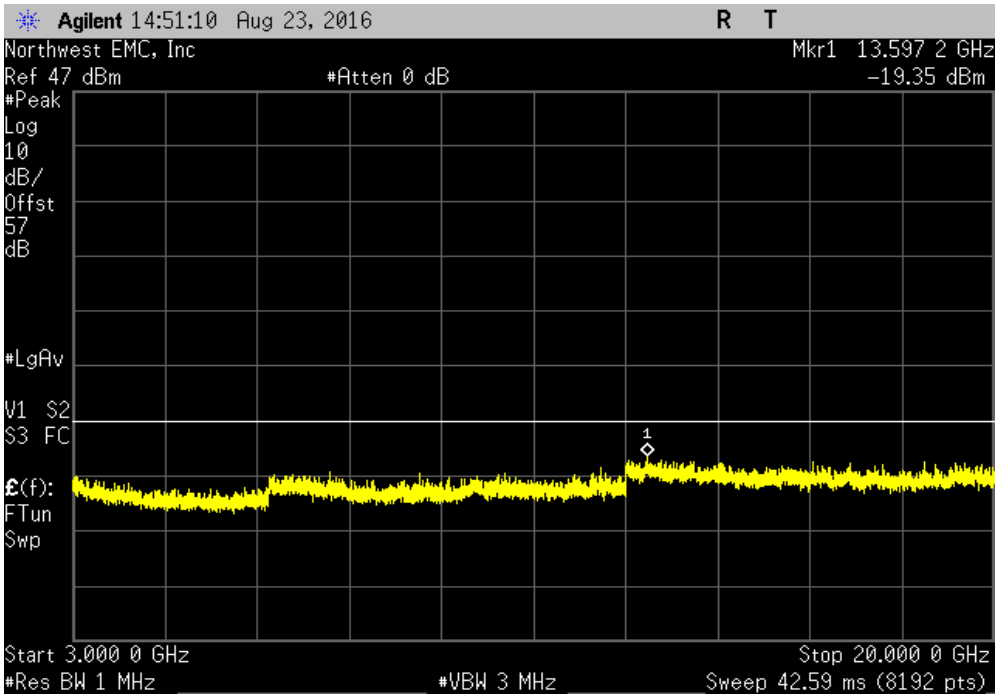
Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-18.48	-13	Pass



Antenna Port 2, LTE5, 1987.5 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.35	-13	Pass



INTERMODULATION - LTE BAND 2

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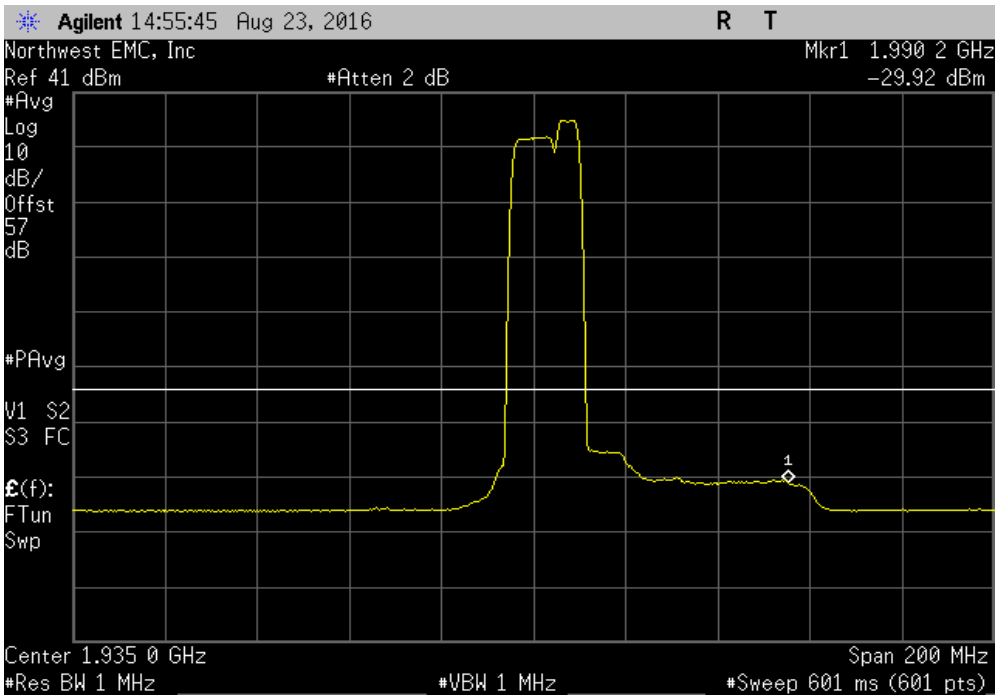
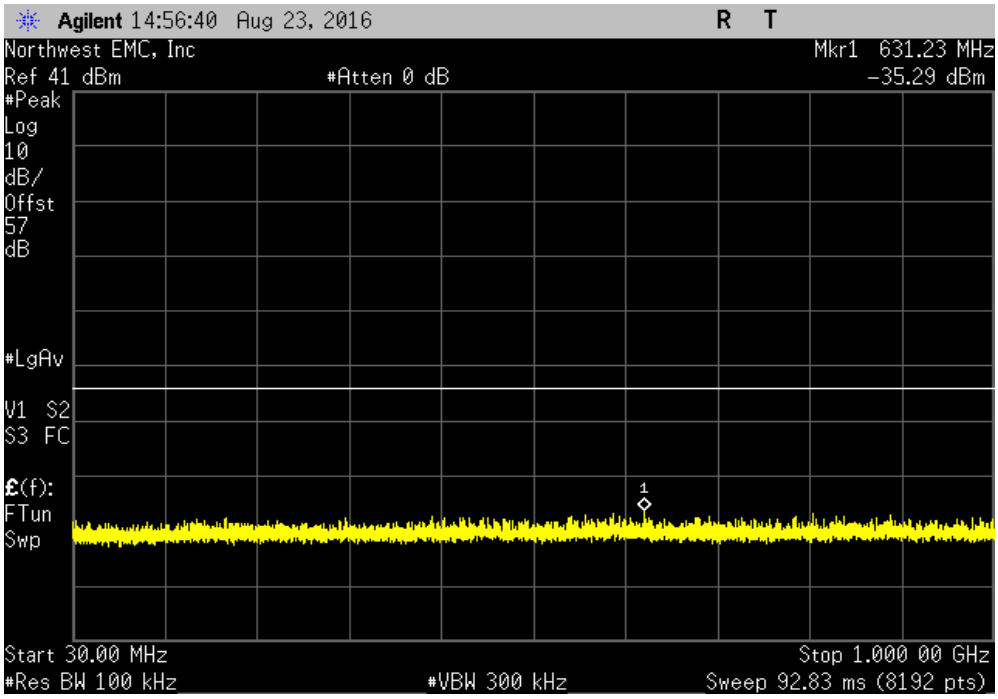
Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.29	-13	Pass



INTERMODULATION - LTE BAND 2

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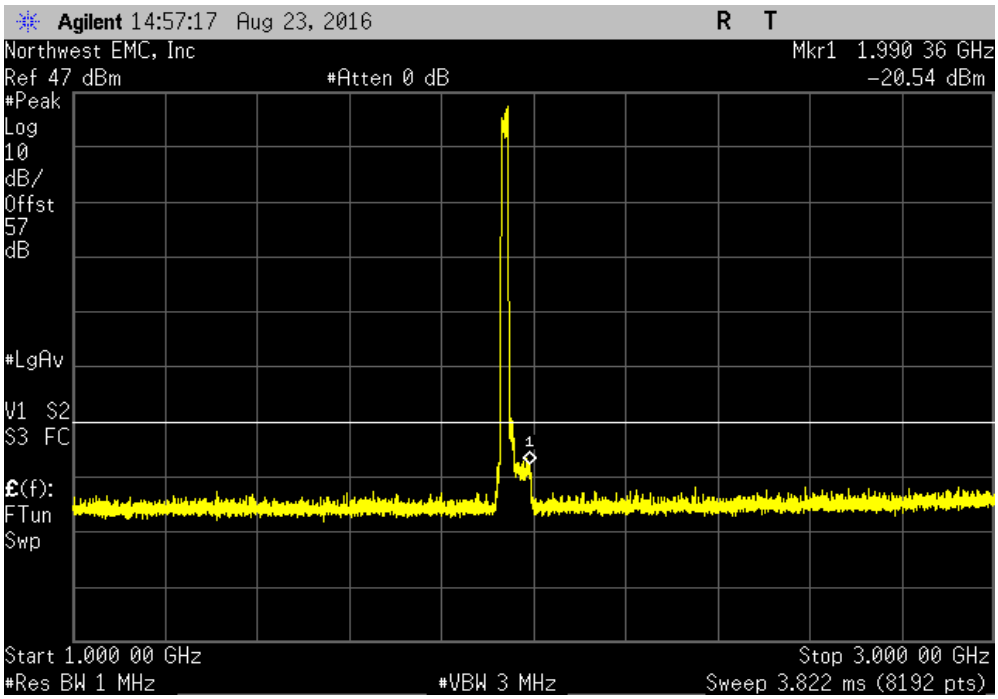
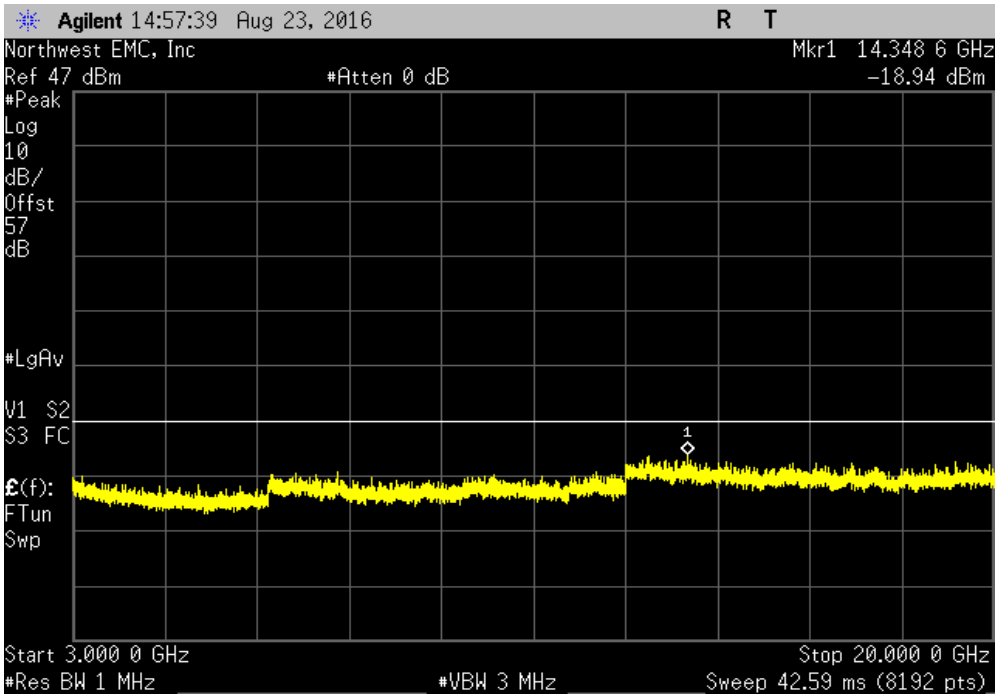
Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.54	-13	Pass



Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.94	-13	Pass



INTERMODULATION - LTE BAND 2

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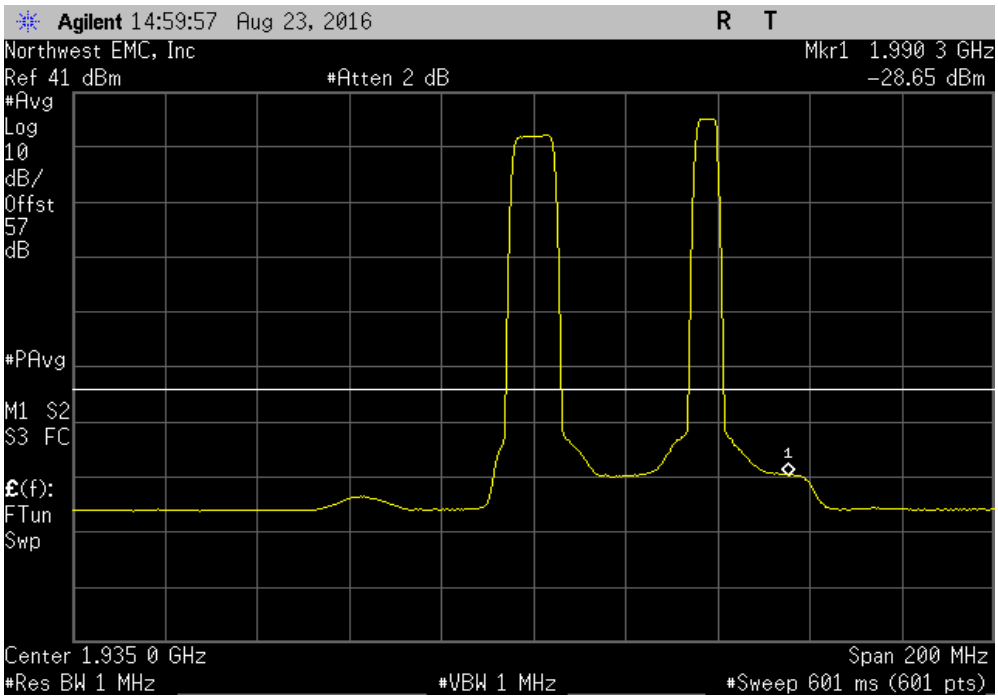
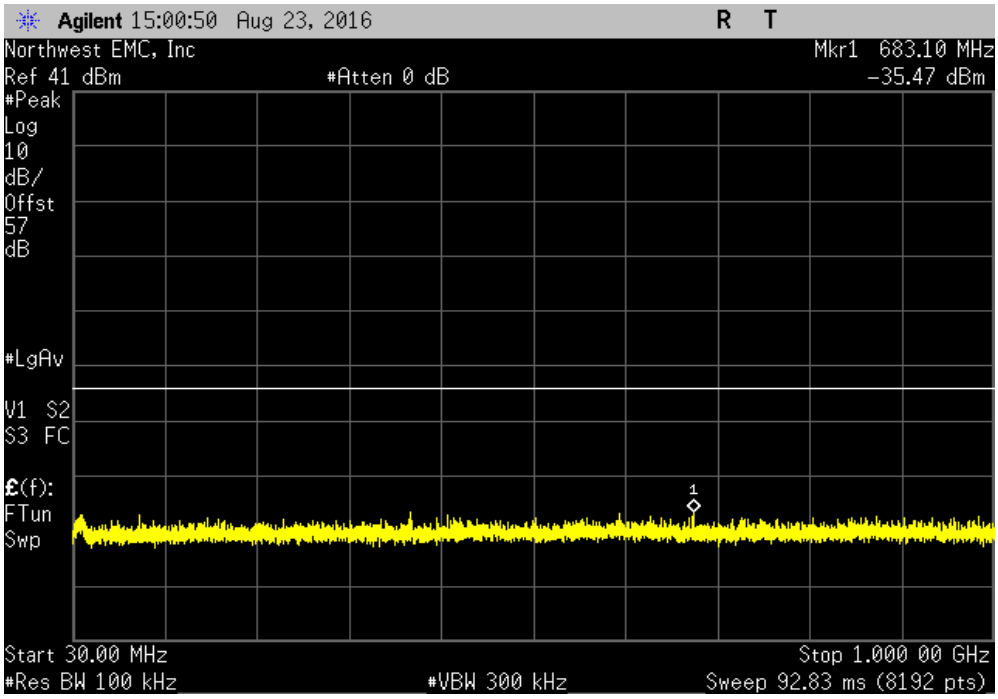
Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.47	-13	Pass



INTERMODULATION - LTE BAND 2

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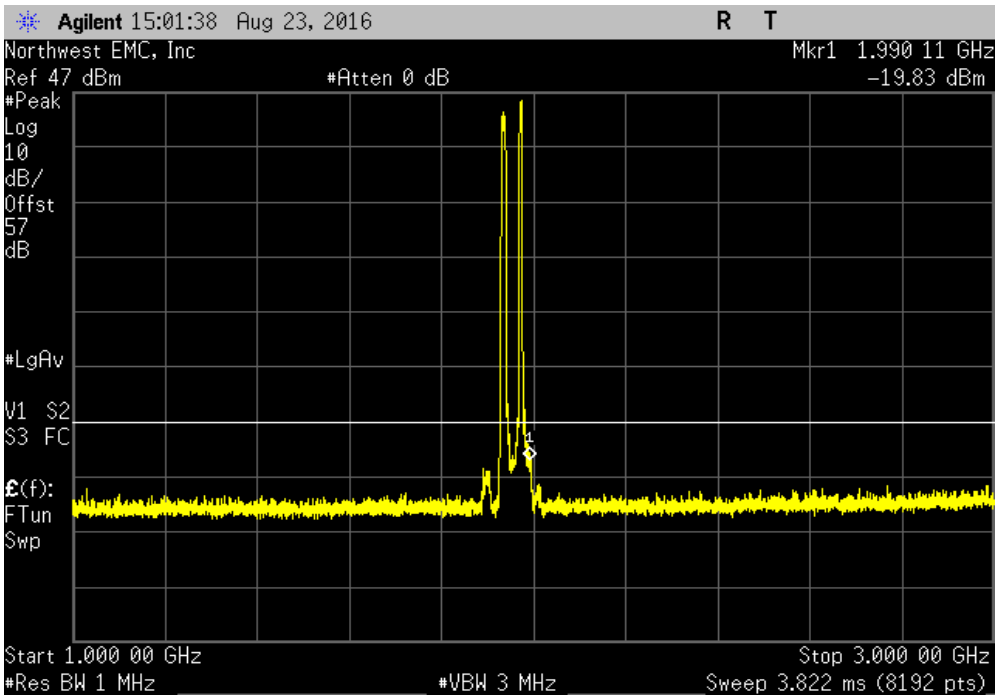
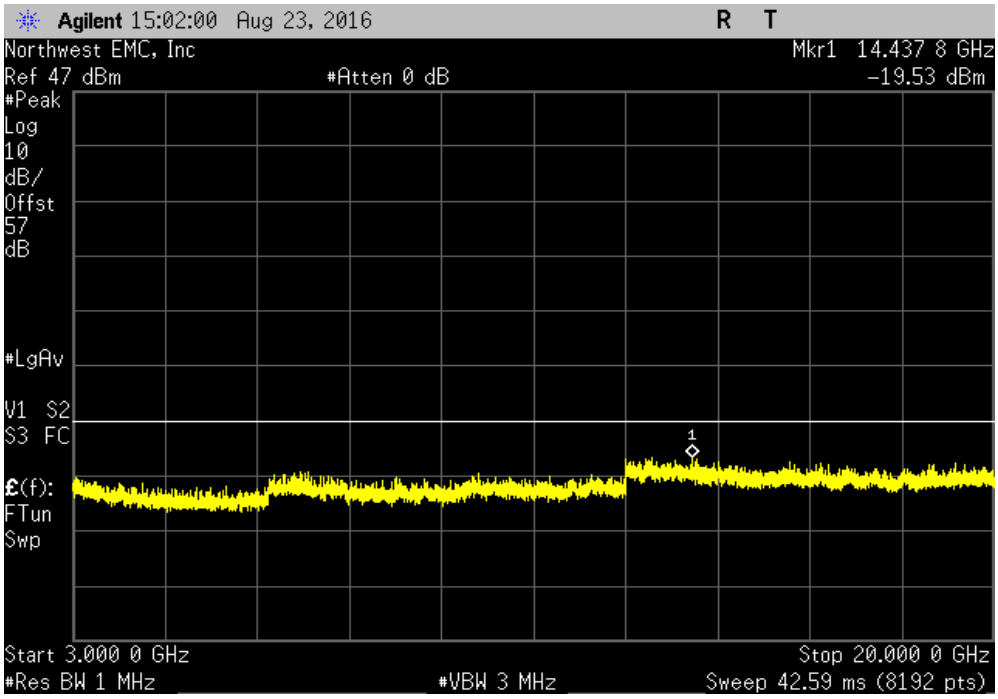
Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.83	-13	Pass



Antenna Port 2, LTE10, 1935 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.53	-13	Pass

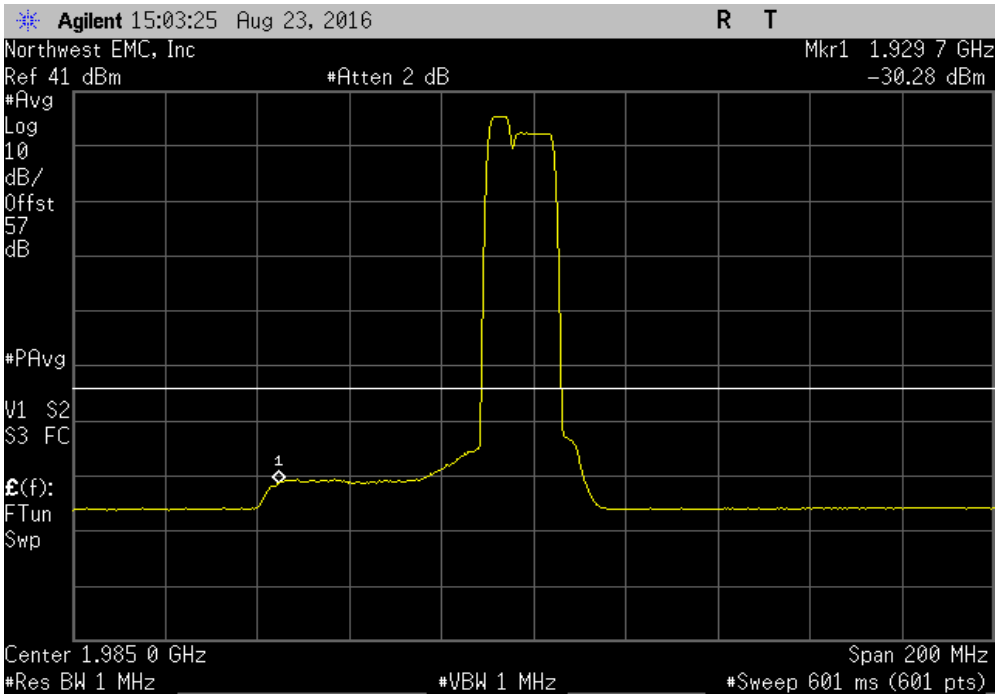


INTERMODULATION - LTE BAND 2

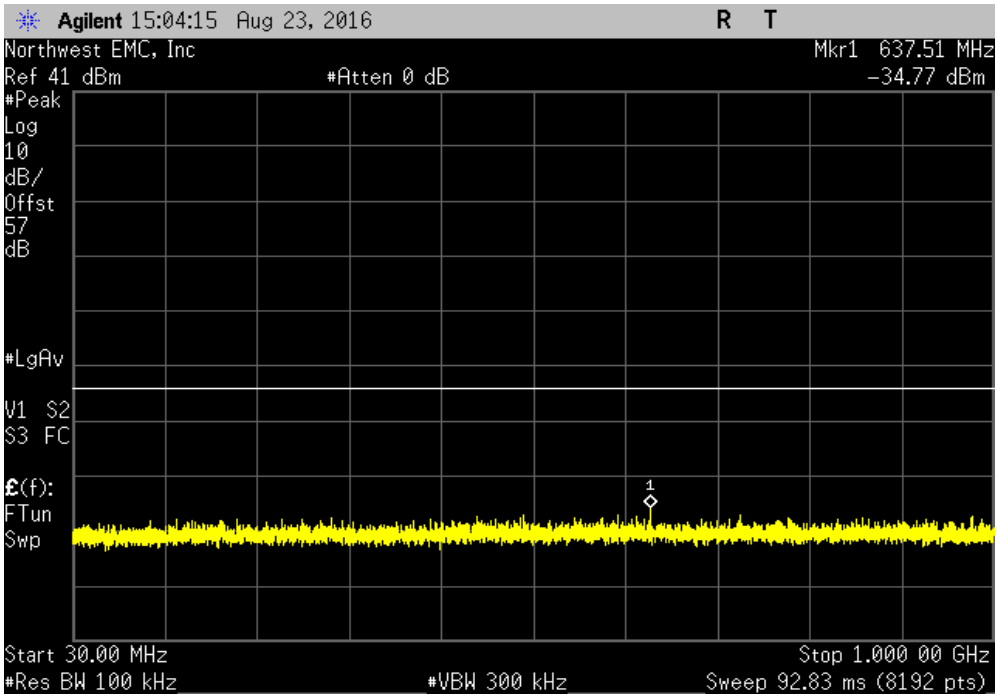
NORTHWEST EMC

XMit 2016.05.06

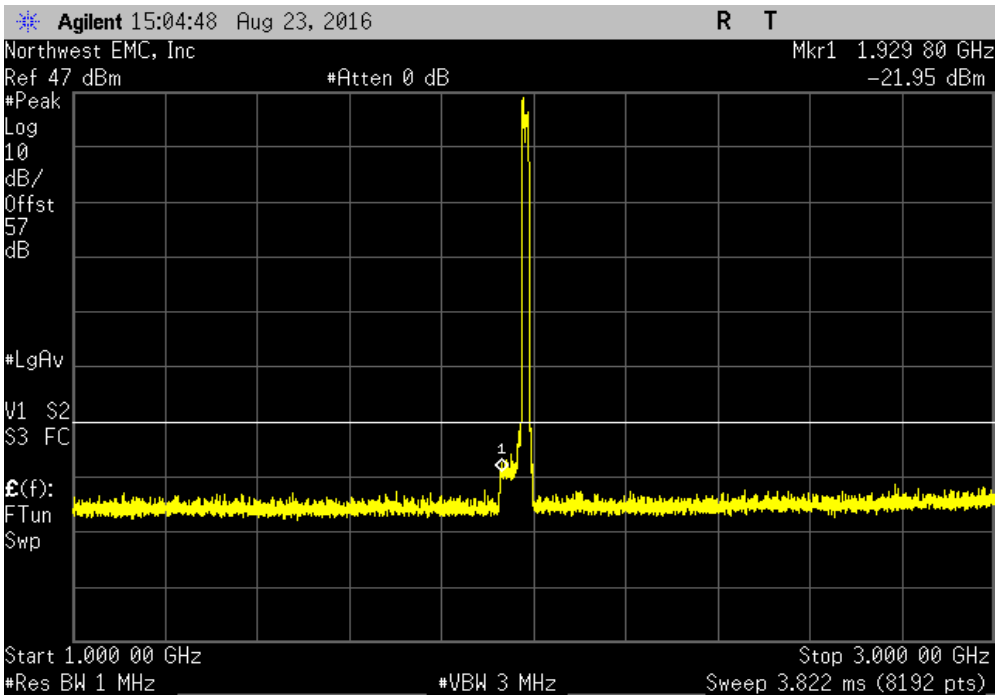
Antenna Port 2, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



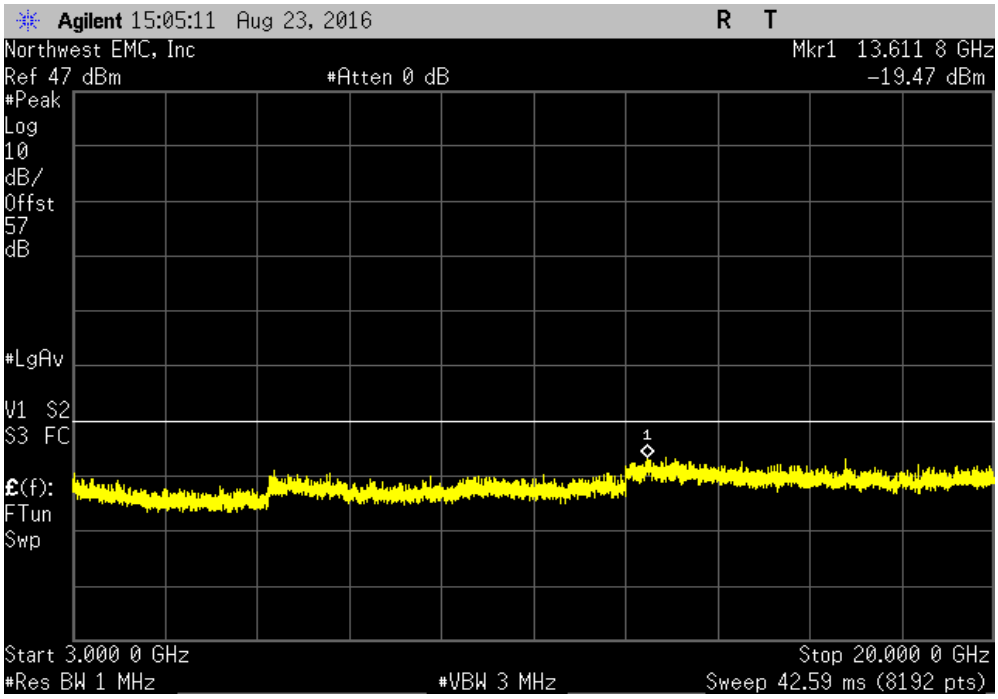
Antenna Port 2, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.77	-13	Pass



Antenna Port 2, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.95	-13	Pass



Antenna Port 2, LTE10, 1985 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.47	-13	Pass

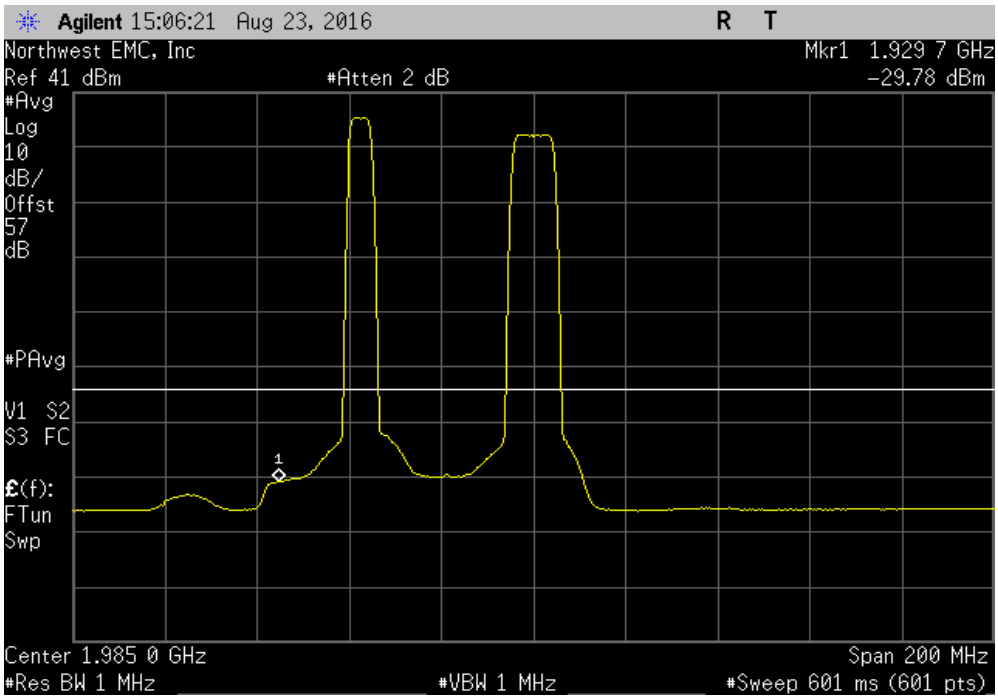


INTERMODULATION - LTE BAND 2

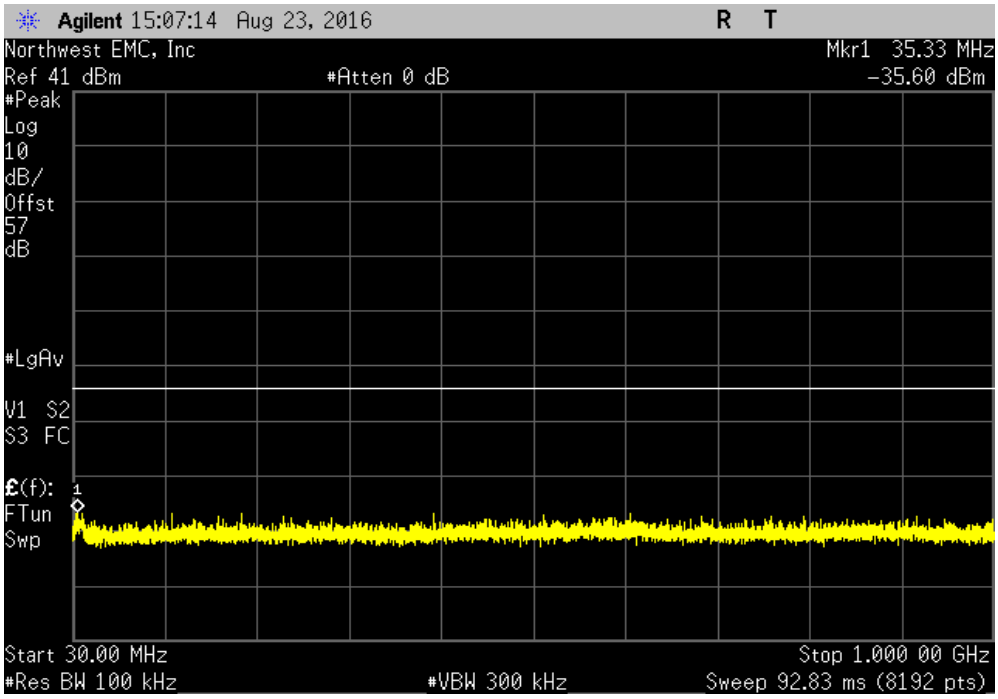
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.60	-13	Pass

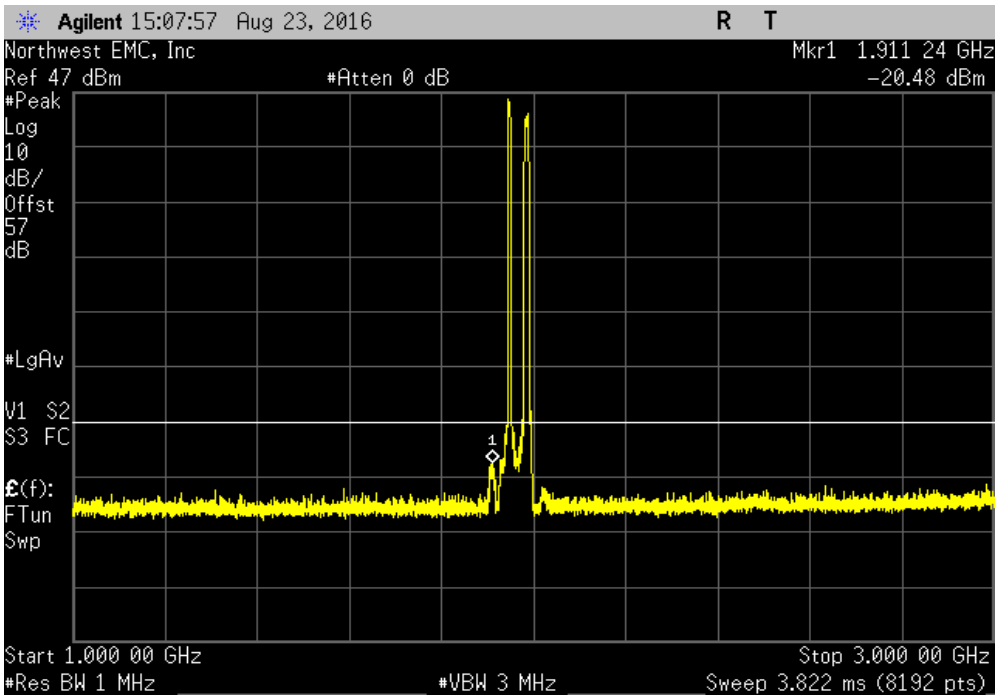


INTERMODULATION - LTE BAND 2

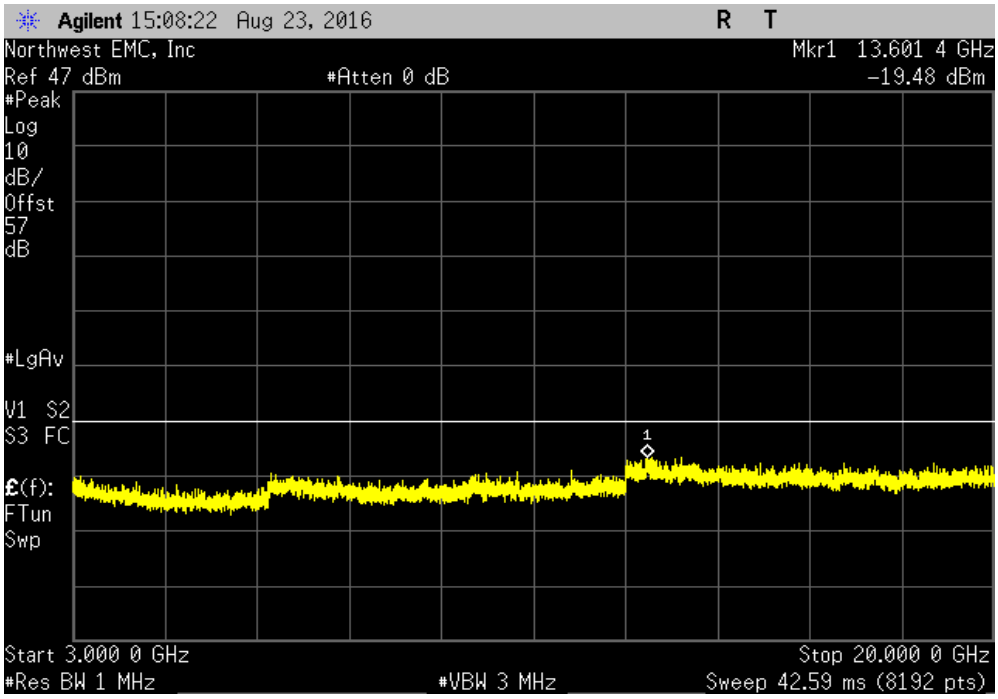
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.48	-13	Pass



Antenna Port 2, LTE10, 1985 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.48	-13	Pass

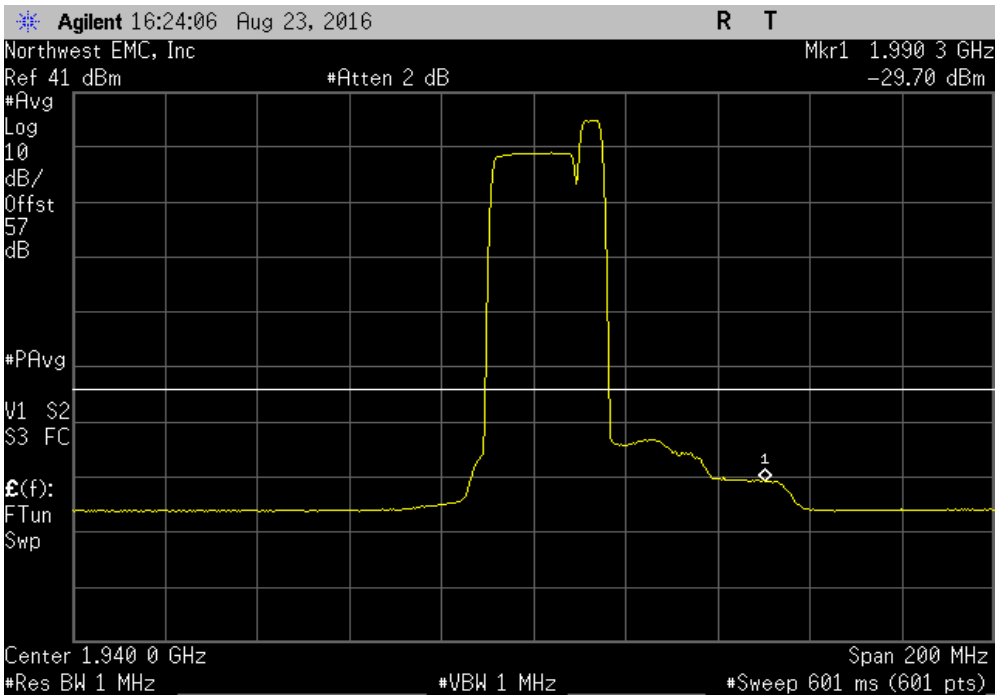


INTERMODULATION - LTE BAND 2

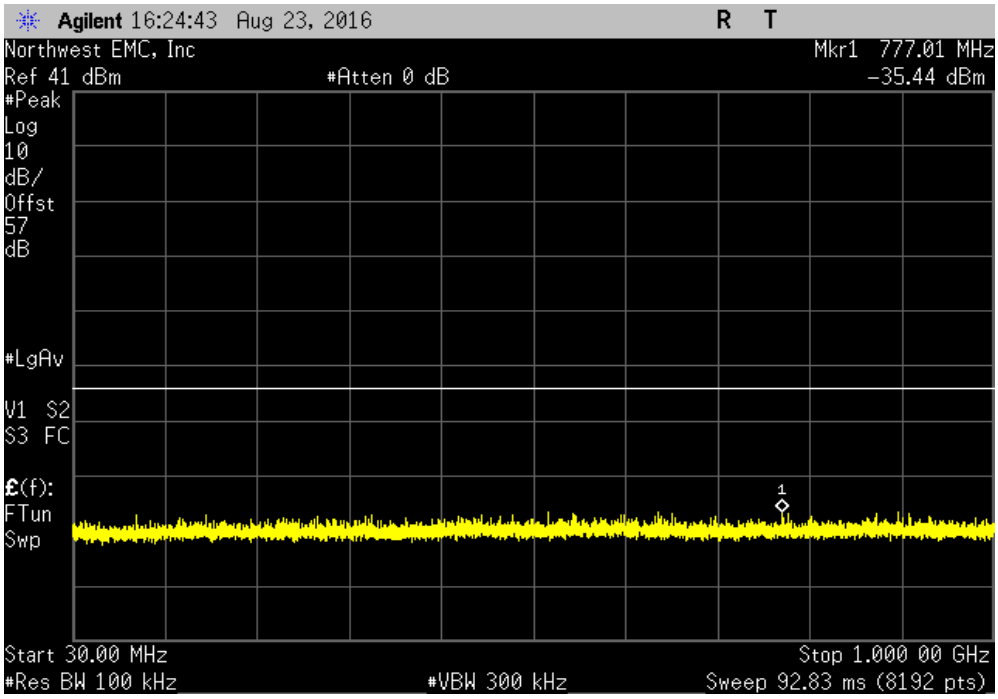
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



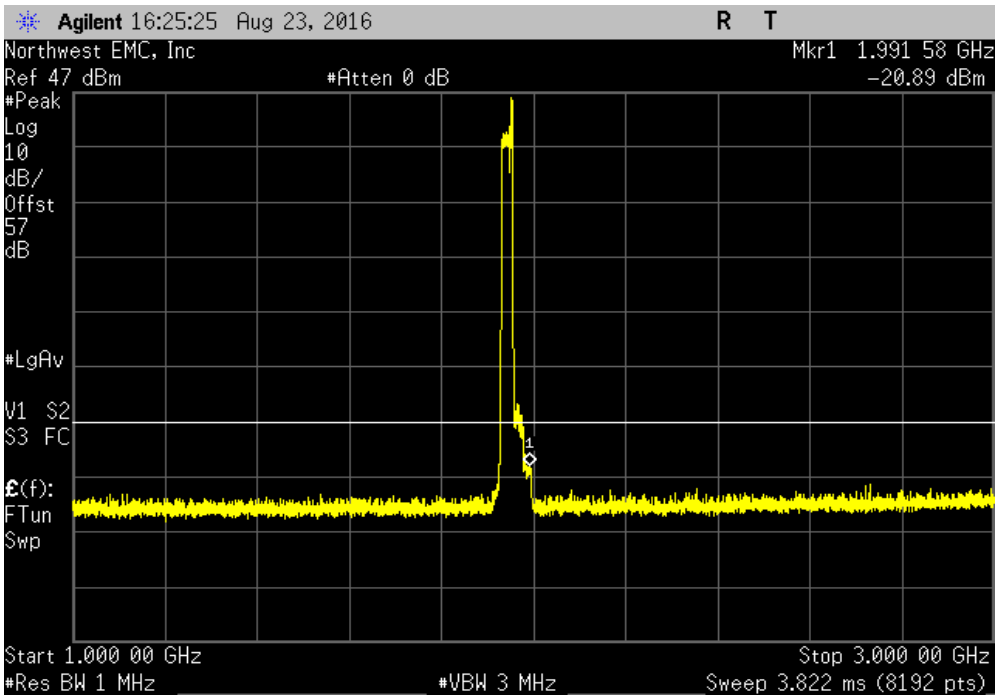
Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.44	-13	Pass



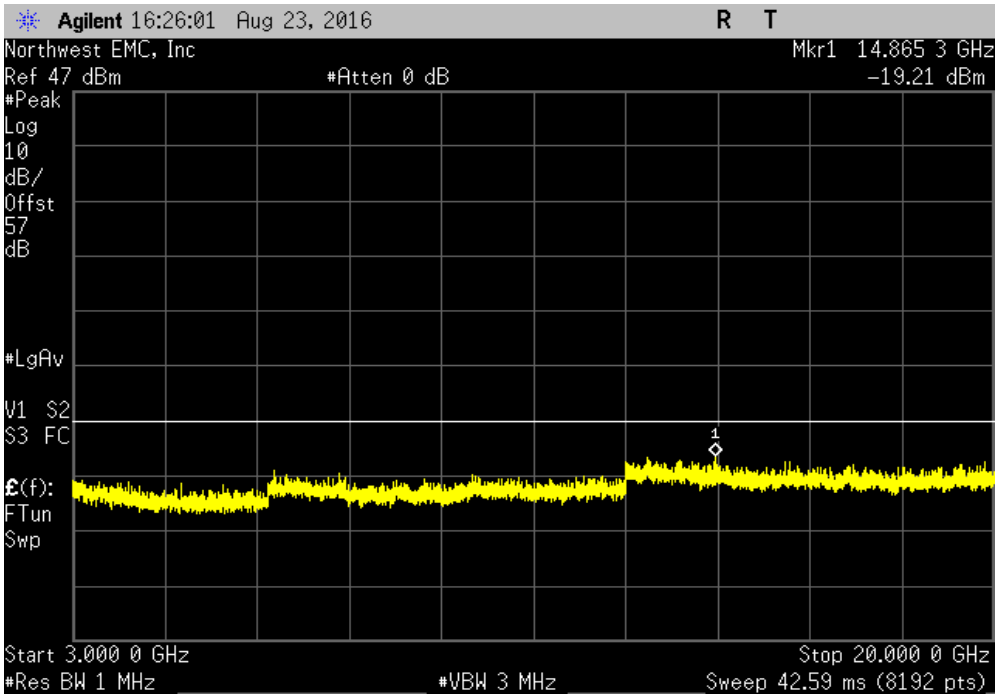
INTERMODULATION - LTE BAND 2

XMit 2016.05.06

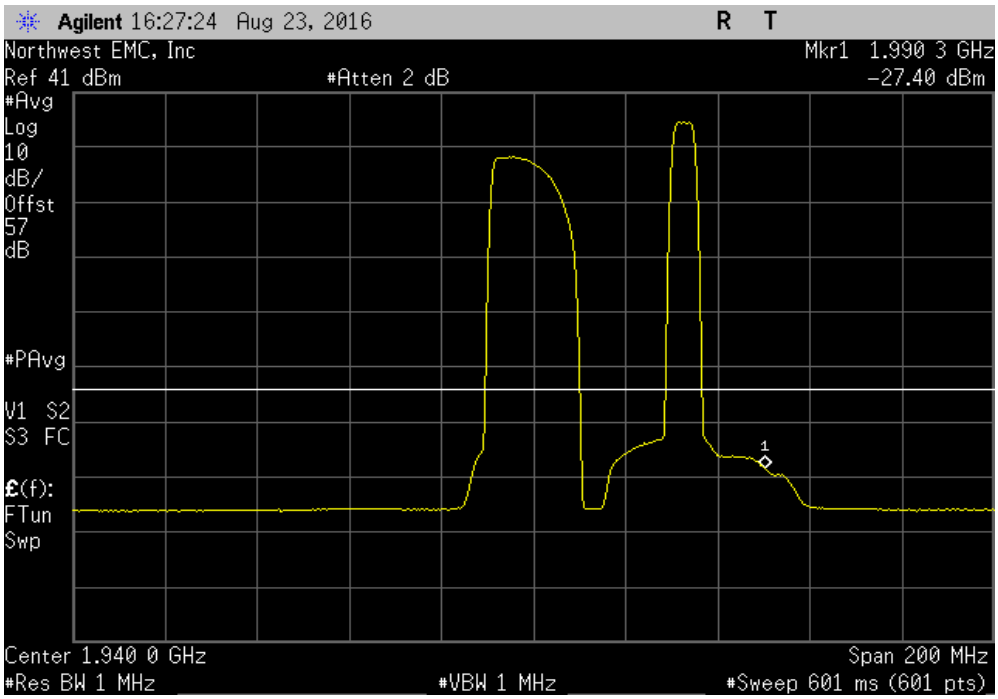
Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.89	-13	Pass



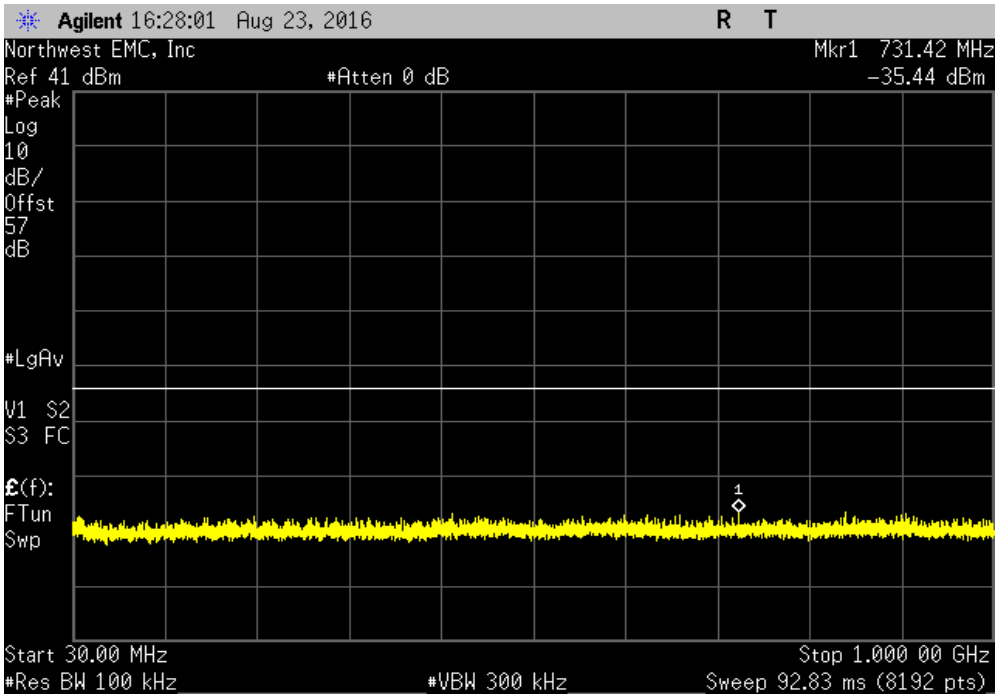
Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.21	-13	Pass



Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.45	-13	Pass

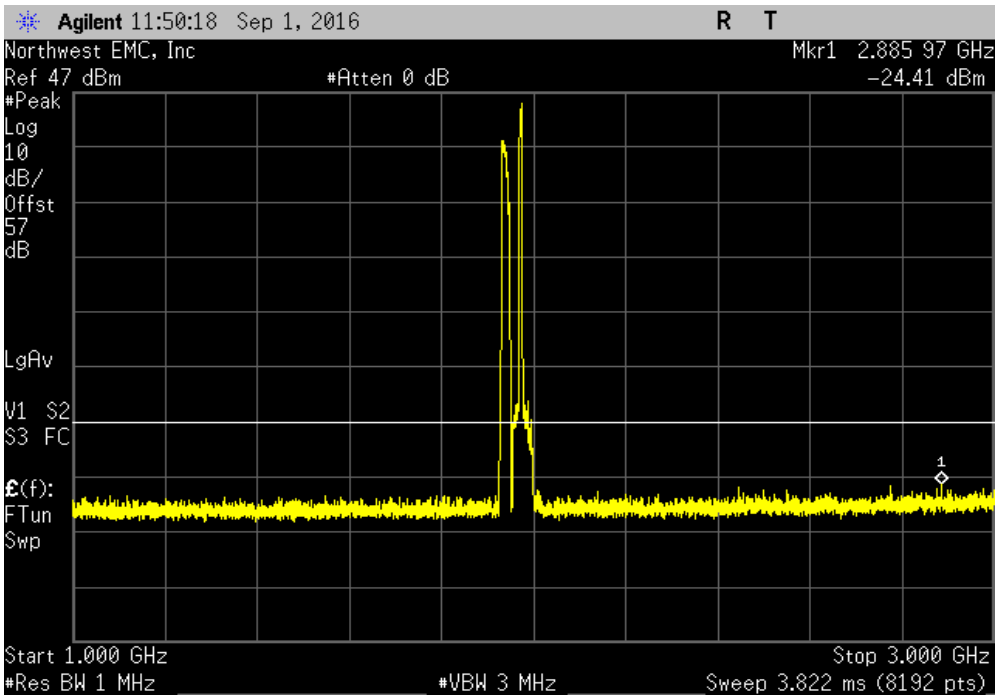


INTERMODULATION - LTE BAND 2

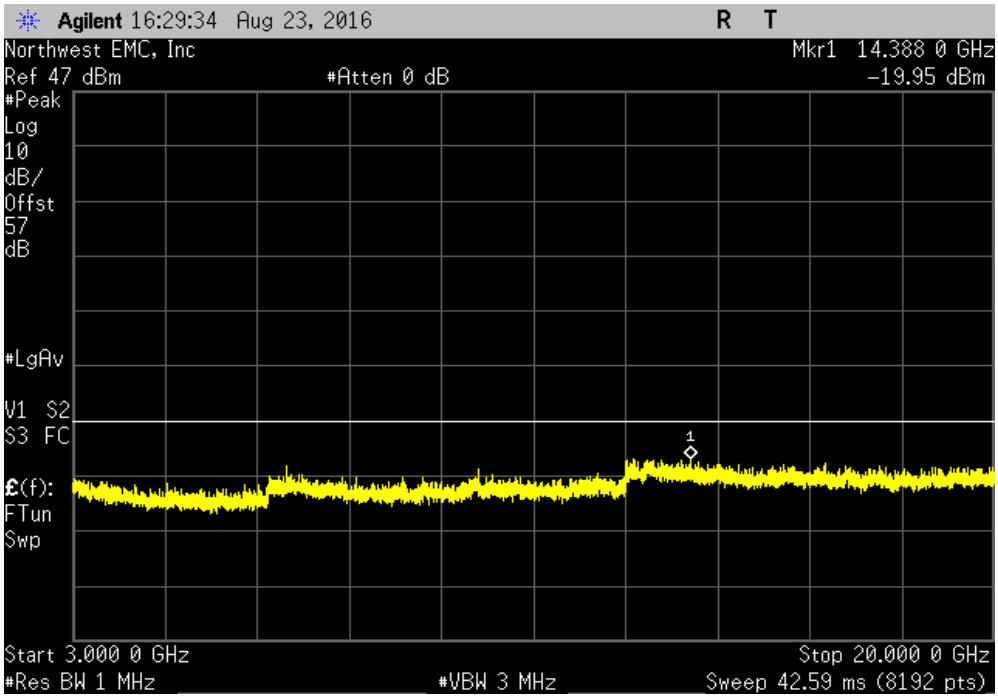
NORTHWEST EMC

XMit 2016.05.06

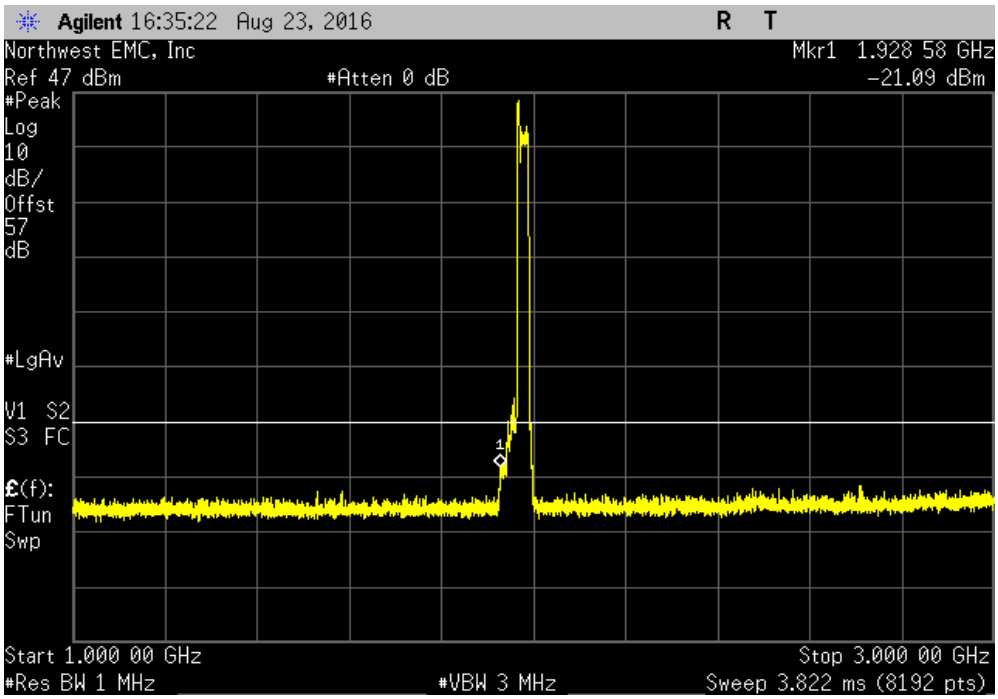
Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-24.41	-13	Pass



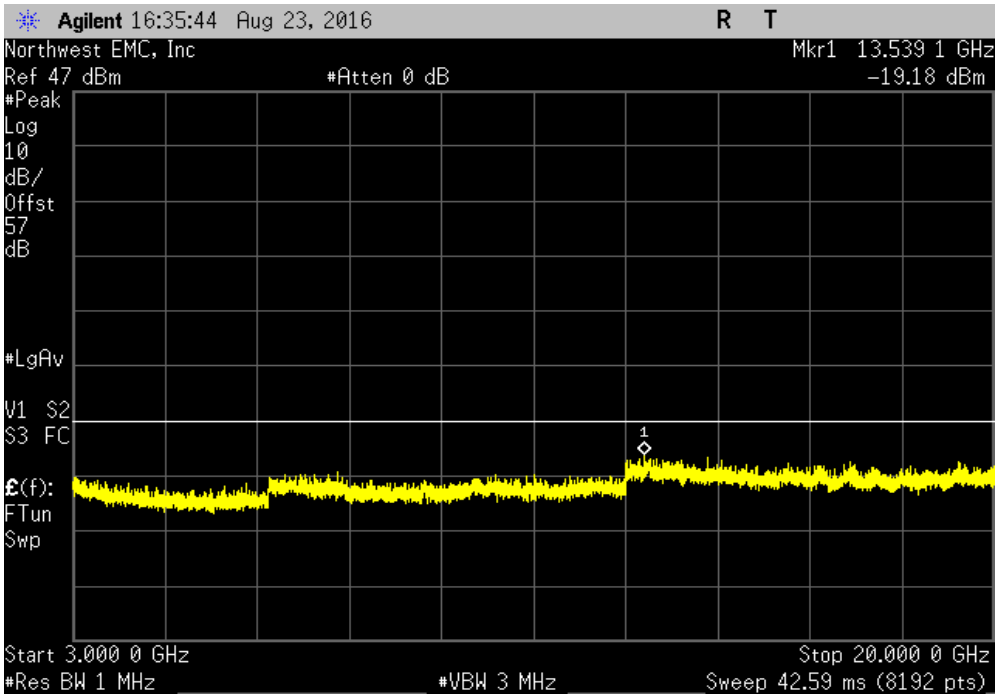
Antenna Port 2, LTE20, 1940 MHz, Low Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.95	-13	Pass



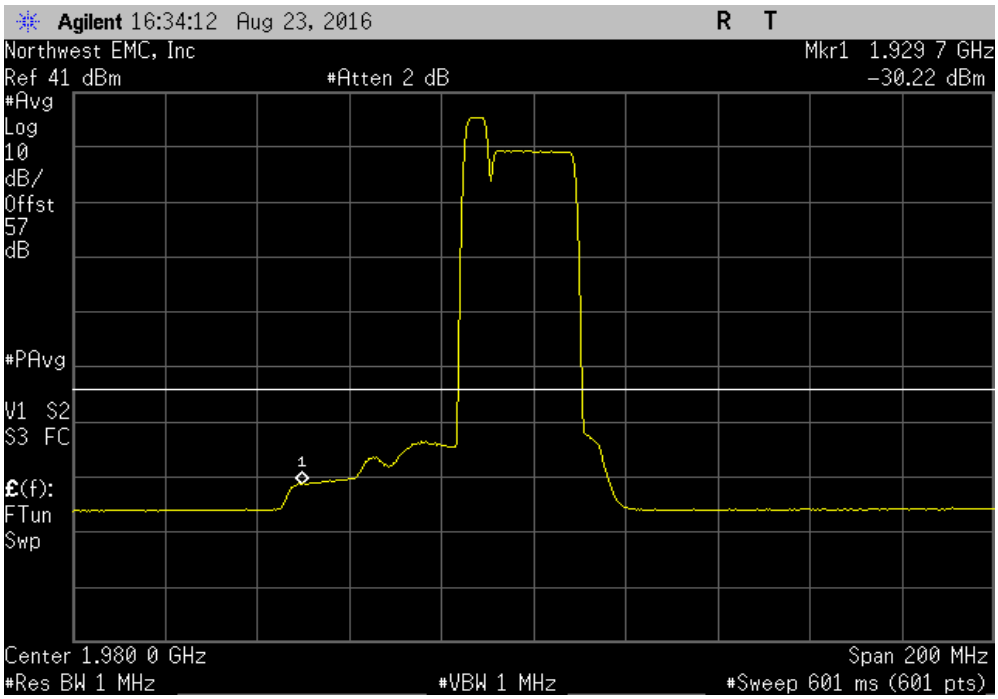
Antenna Port 2, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.09	-13	Pass



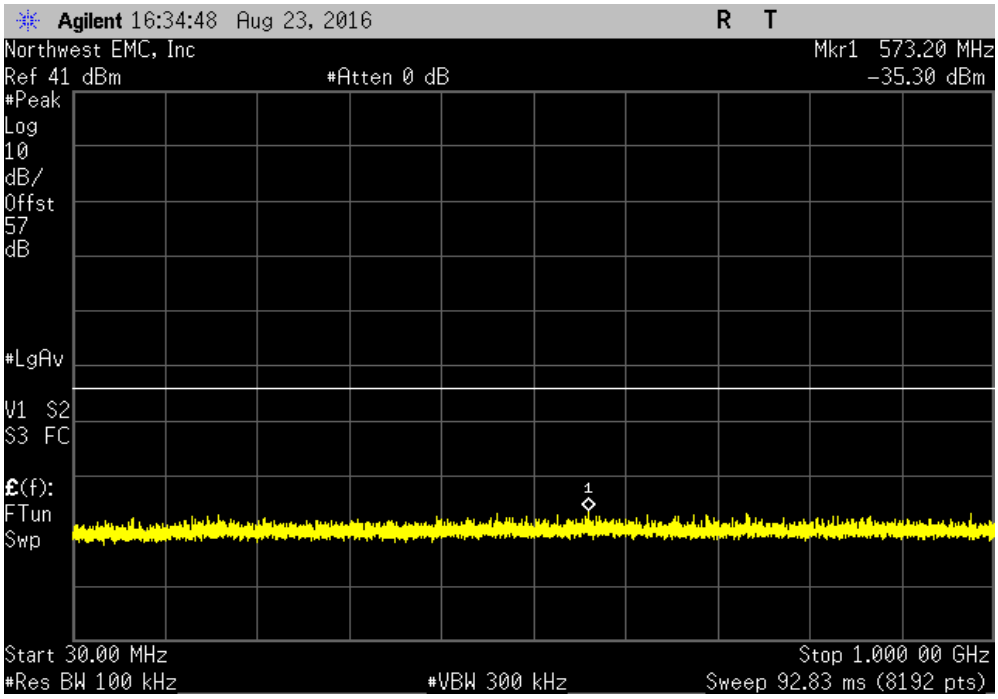
Antenna Port 2, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.18	-13	Pass



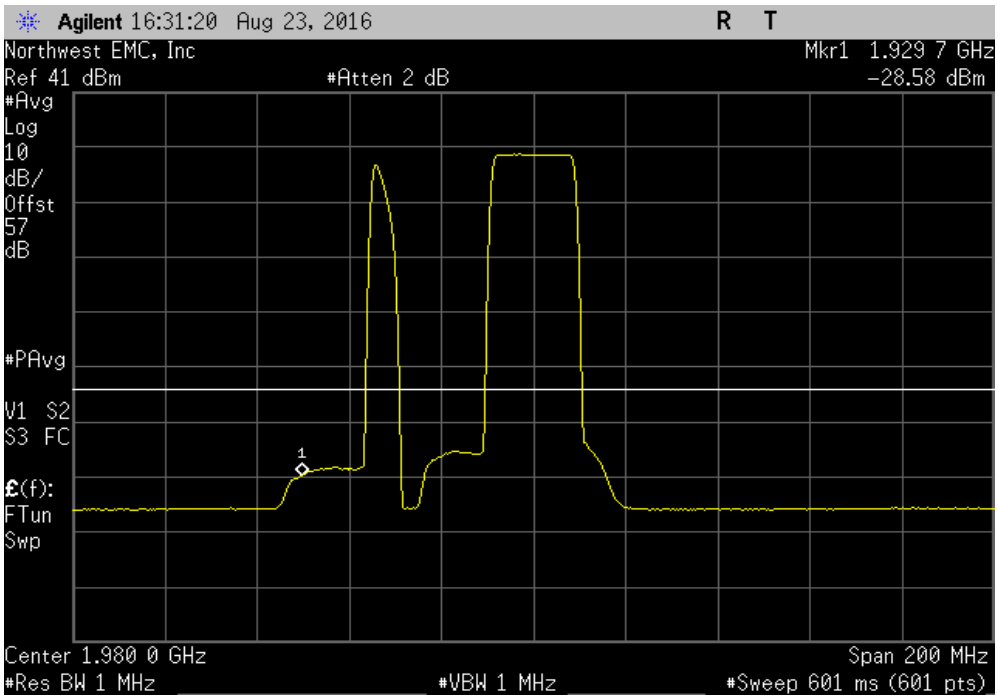
Antenna Port 2, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



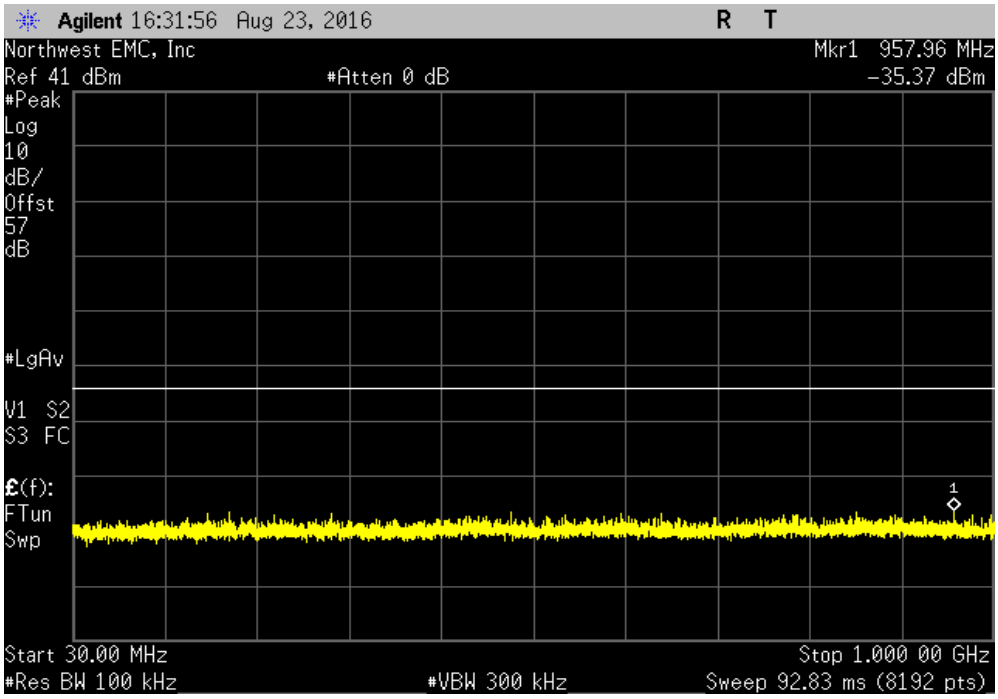
Antenna Port 2, LTE20, 1980 MHz, High Band Edge, adjacent secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.30	-13	Pass



Antenna Port 2, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			**Max Value (dBm)**	**Limit ≤ (dBm)**	**Result**
	Fundamental			N/A	N/A	N/A



Antenna Port 2, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			**Max Value (dBm)**	**Limit ≤ (dBm)**	**Result**
	30 MHz - 1 GHz			-35.37	-13	Pass

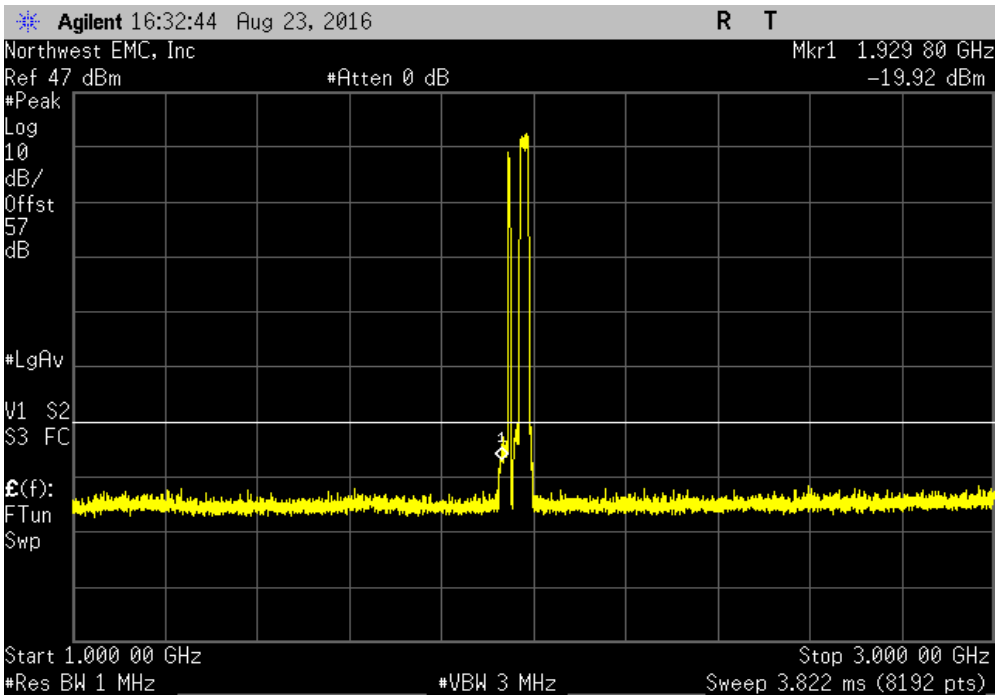


INTERMODULATION - LTE BAND 2

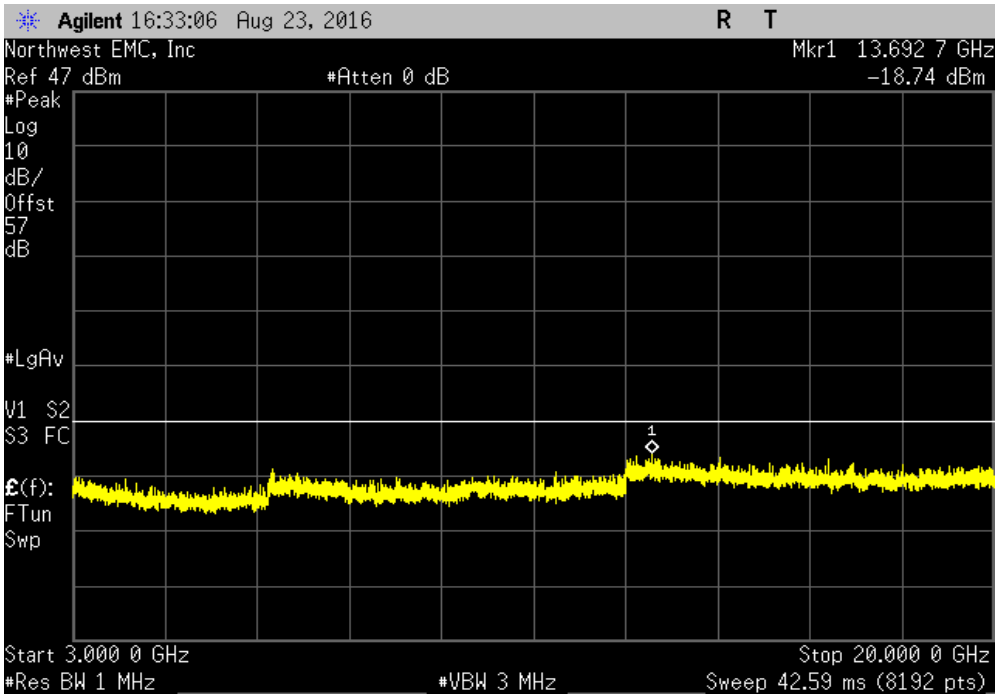
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 2, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.92	-13	Pass



Antenna Port 2, LTE20, 1980 MHz, High Band Edge, max offset secondary channel						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.74	-13	Pass



INTERMODULATION - WCDMA

XMit 2016.05.06

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.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Analyzer plots utilizing appropriate resolution bandwidth and no video filtering were made for each modulation type.

Since the EUT does not have an RF Input, the EUT was configured with two modulated carriers, 1 at the edge of the band and the 2nd either adjacent or at max seperation possible. The purpose of the test is to insure that no additional signals are creating by having multiple carriers in the passband of the EUT.

The peak conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to the spurious conducted emissions limits. Measurements close to the limit were re-measured using a RMS average detector.

INTERMODULATION - WCDMA

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02	**Work Order:**	KMWC0076
Serial Number:	K163000003	**Date:**	09/22/16
Customer:	Parallel Wireless Inc.	**Temperature:**	21.6 °C
Attendees:	Edward Lee	**Humidity:**	49.8% RH
Project:	None	**Barometric Pres.:**	1016 mbar
Tested by:	Johnny Candelas	**Power:** 48VDC	**Job Site:** OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

Configuration #	1	Signature

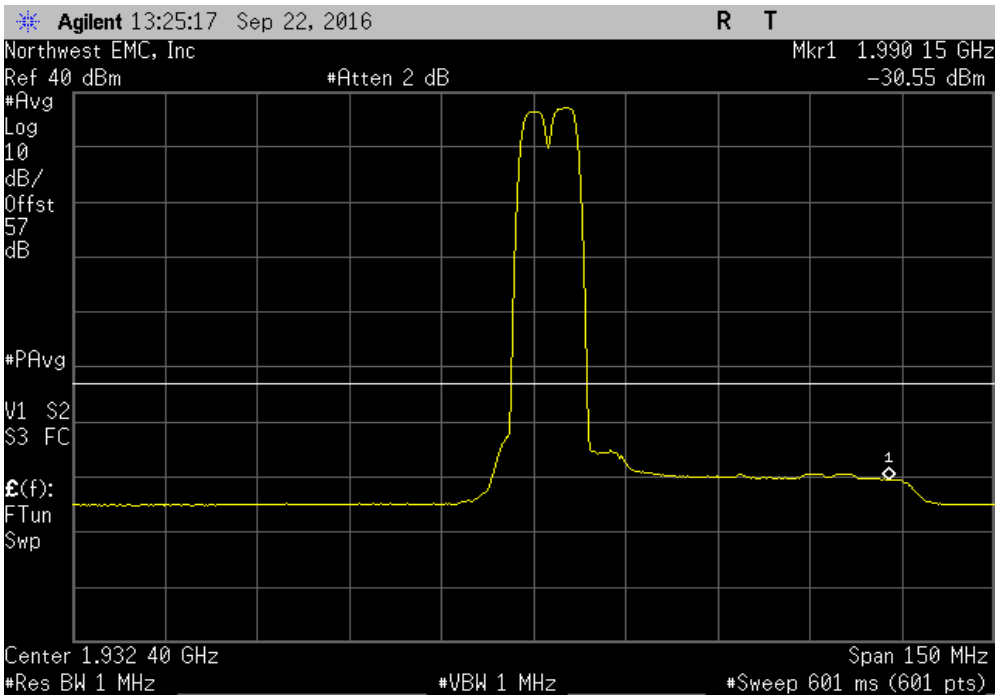
		Frequency Range	Max Value (dBm)	Limit ≤ (dBm)	Result
Antenna Port 1					
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	30 MHz - 1 GHz	-35.1	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	1 GHz - 3 GHz	-25.09	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	3 GHz - 20 GHz	-19.65	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	30 MHz - 1 GHz	-34.6	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	1 GHz - 3 GHz	-19.13	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	3 GHz - 20 GHz	-18.57	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	30 MHz - 1 GHz	-34.8	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	1 GHz - 3 GHz	-19.27	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	3 GHz - 20 GHz	-19.22	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	30 MHz - 1 GHz	-34.67	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	1 GHz - 3 GHz	-21.79	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	3 GHz - 20 GHz	-19.61	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	30 MHz - 1 GHz	-34.51	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	1 GHz - 3 GHz	-21.73	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	3 GHz - 20 GHz	-19.33	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	30 MHz - 1 GHz	-34.43	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	1 GHz - 3 GHz	-24.07	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	3 GHz - 20 GHz	-19.45	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	30 MHz - 1 GHz	-34.15	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	1 GHz - 3 GHz	-20.44	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	3 GHz - 20 GHz	-18.55	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	30 MHz - 1 GHz	-35.01	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	1 GHz - 3 GHz	-19.2	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	3 GHz - 20 GHz	-18.68	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	30 MHz - 1 GHz	-34.4	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	1 GHz - 3 GHz	-22.83	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	3 GHz - 20 GHz	-19.32	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	30 MHz - 1 GHz	-33.78	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	1 GHz - 3 GHz	-21.64	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	3 GHz - 20 GHz	-19.54	-13	Pass
Antenna Port 2					
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	30 MHz - 1 GHz	-34.73	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	1 GHz - 3 GHz	-24.26	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz	3 GHz - 20 GHz	-18.66	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	30 MHz - 1 GHz	-35.34	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	1 GHz - 3 GHz	-18.42	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz	3 GHz - 20 GHz	-19.11	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	30 MHz - 1 GHz	-35.04	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	1 GHz - 3 GHz	-19.94	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz	3 GHz - 20 GHz	-19.43	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	30 MHz - 1 GHz	-34.61	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	1 GHz - 3 GHz	-21.13	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz	3 GHz - 20 GHz	-18.91	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	Fundamental	N/A	N/A	N/A
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	30 MHz - 1 GHz	-35.05	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	1 GHz - 3 GHz	-21.63	-13	Pass
	Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz	3 GHz - 20 GHz	-19.25	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	30 MHz - 1 GHz	-35.15	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	1 GHz - 3 GHz	-24.48	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz	3 GHz - 20 GHz	-19.08	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	30 MHz - 1 GHz	-33.62	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	1 GHz - 3 GHz	-19.96	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz	3 GHz - 20 GHz	-19.26	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	30 MHz - 1 GHz	-33.91	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	1 GHz - 3 GHz	-19.67	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz	3 GHz - 20 GHz	-19.27	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	30 MHz - 1 GHz	-34.73	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	1 GHz - 3 GHz	-23.32	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz	3 GHz - 20 GHz	-18.42	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	Fundamental	N/A	N/A	N/A
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	30 MHz - 1 GHz	-34.52	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	1 GHz - 3 GHz	-20.44	-13	Pass
	High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz	3 GHz - 20 GHz	-19.15	-13	Pass

INTERMODULATION - WCDMA

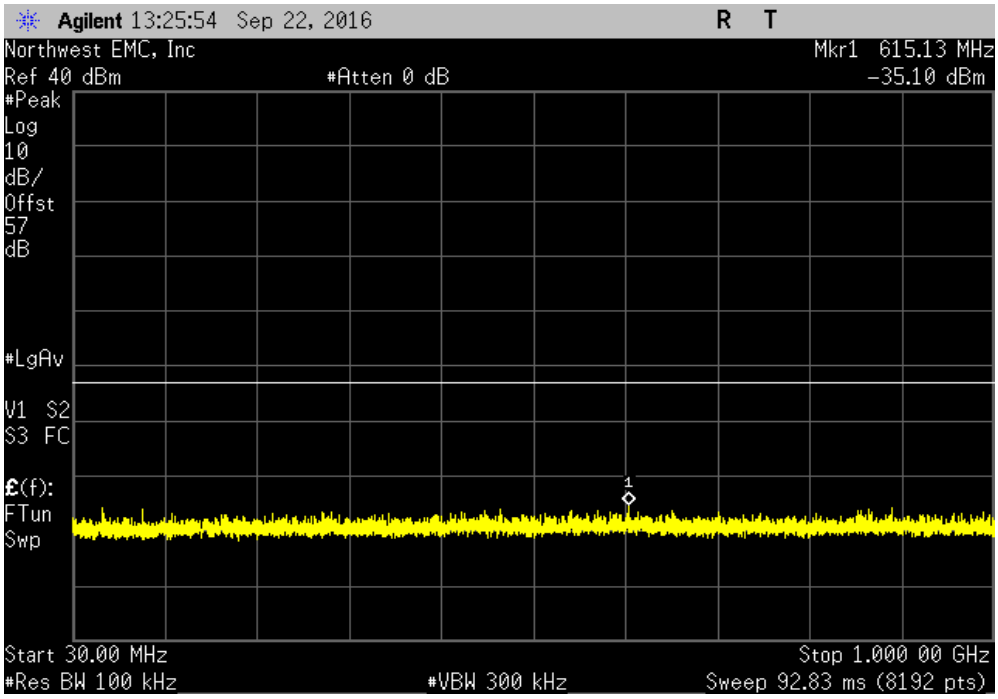
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



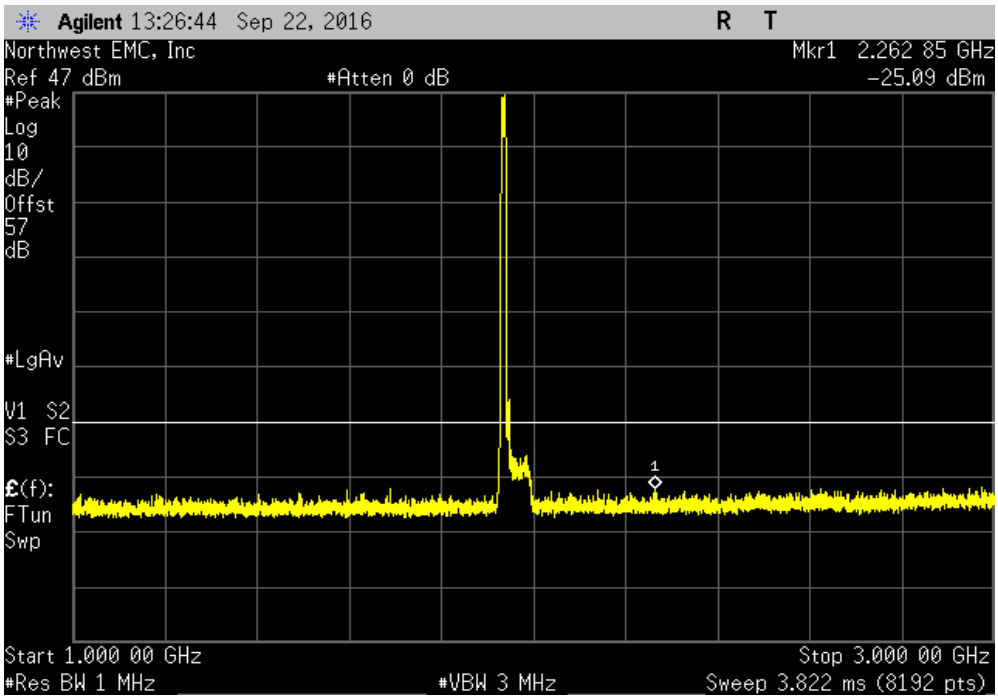
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.1	-13	Pass



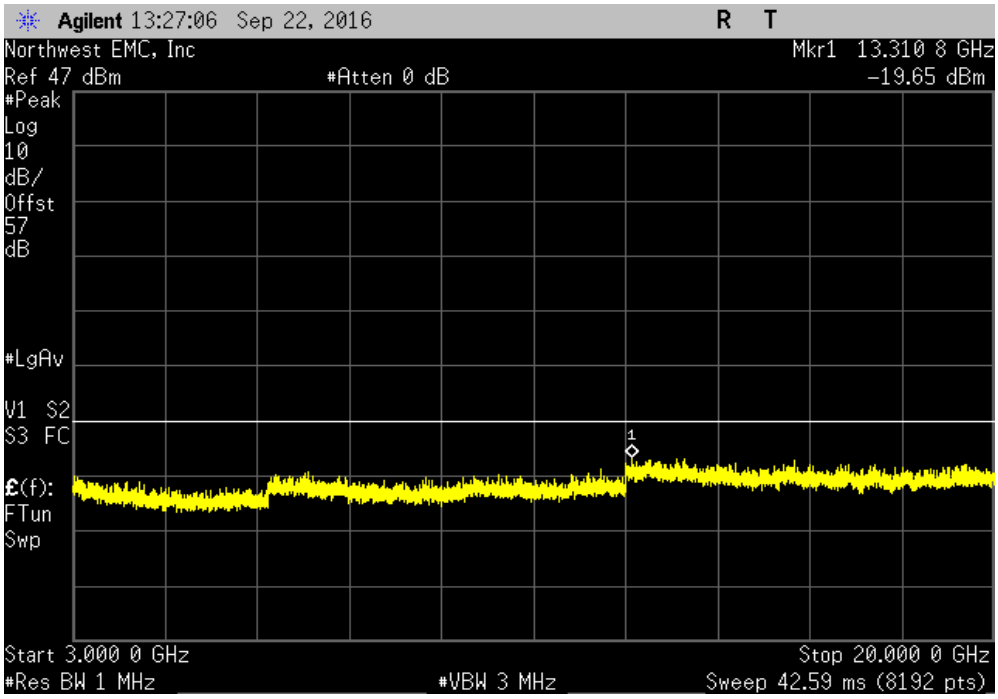
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-25.09	-13	Pass



Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.65	-13	Pass



INTERMODULATION - WCDMA

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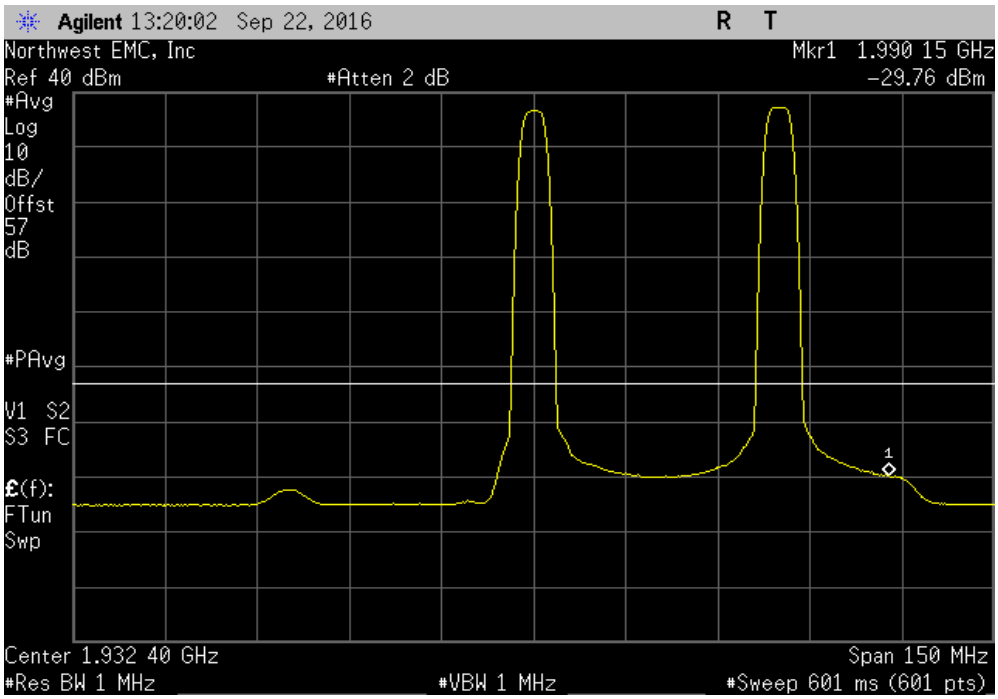
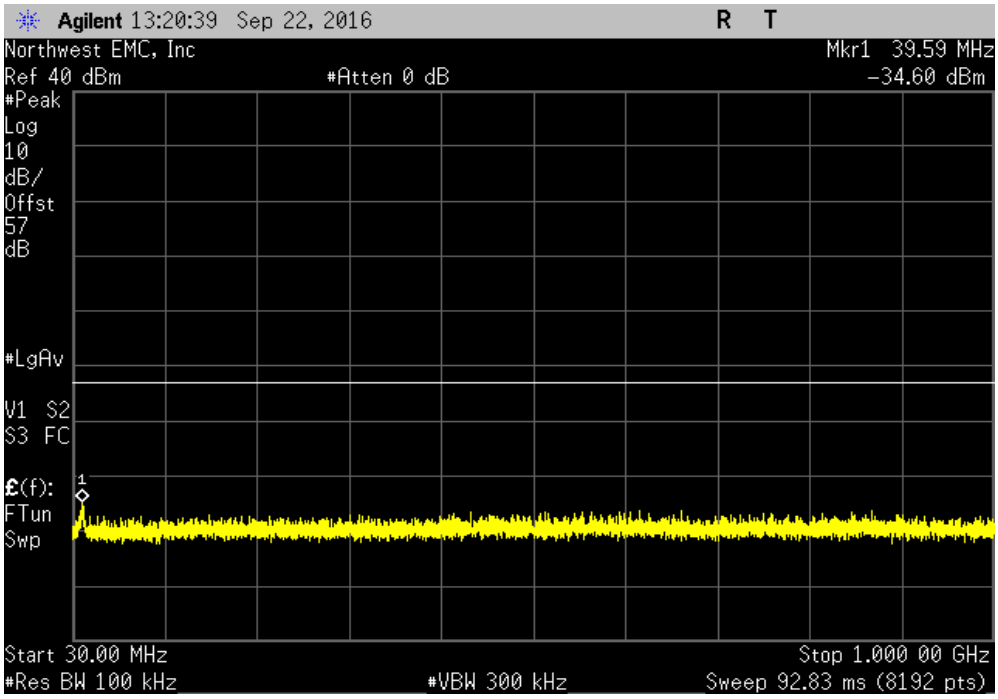
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



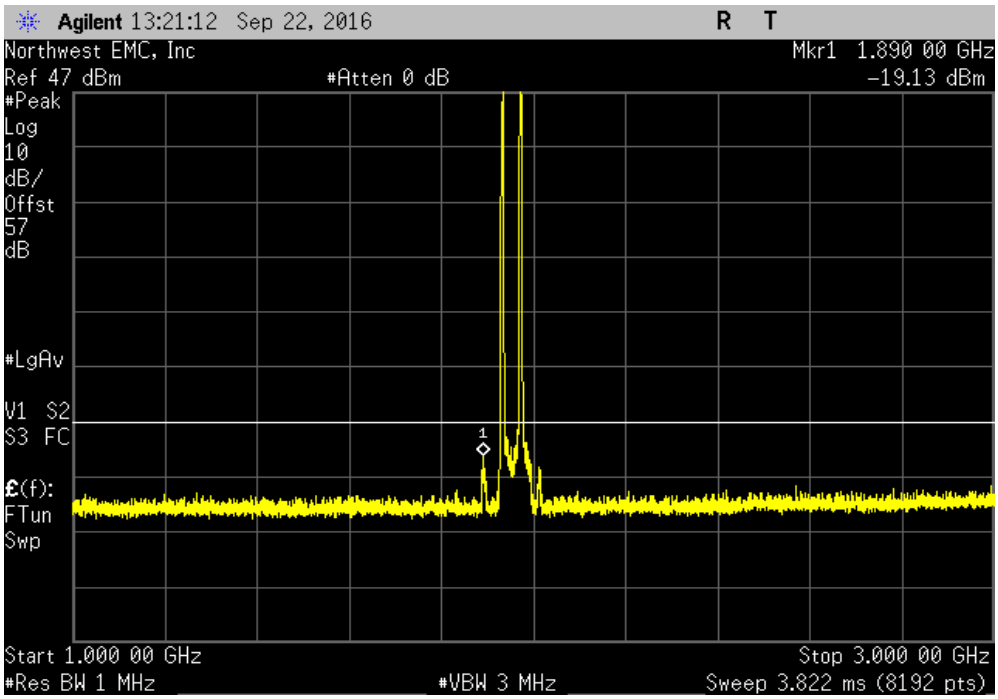
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.6	-13	Pass



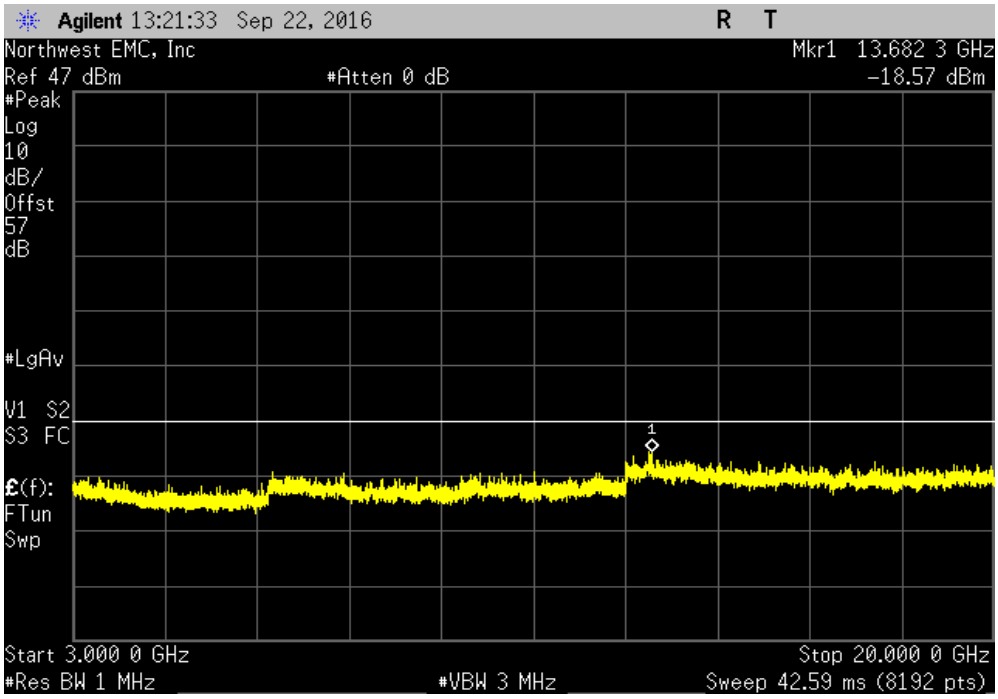
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.13	-13	Pass



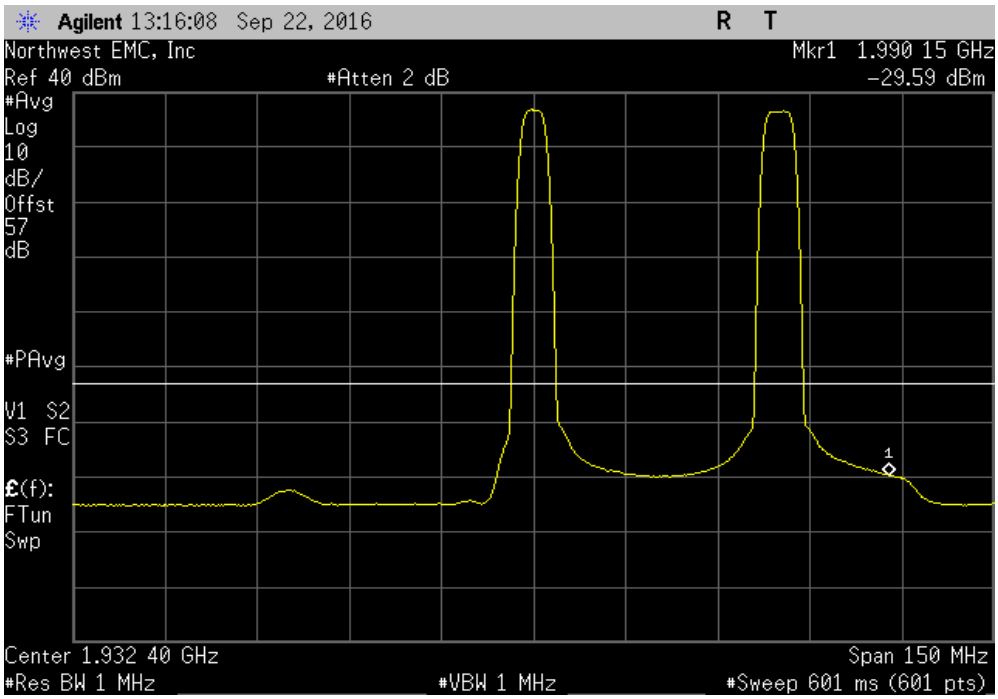
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.57	-13	Pass



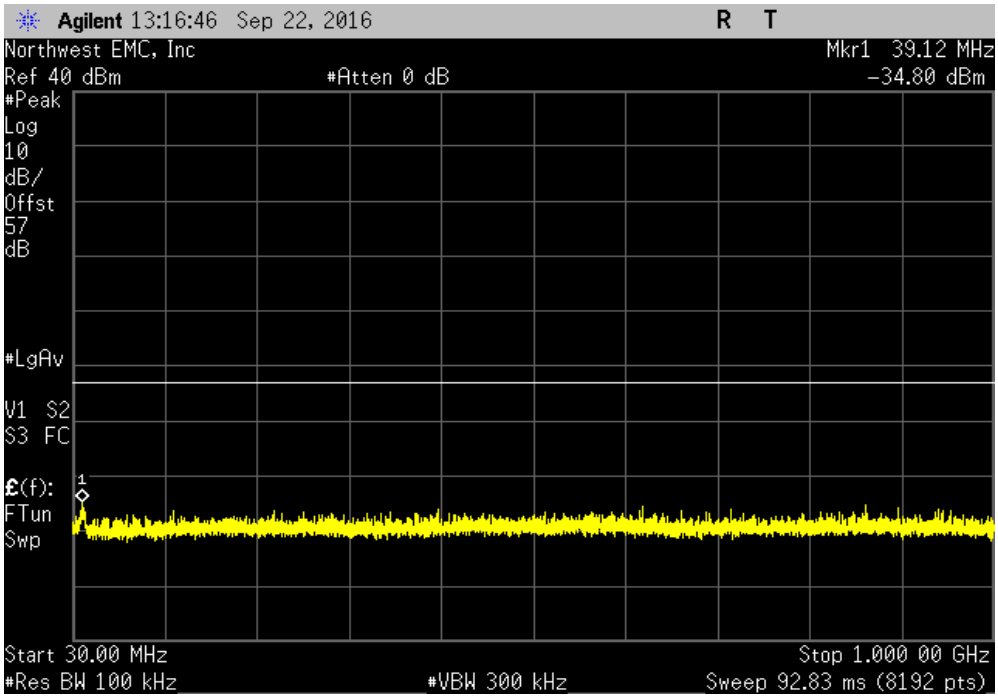
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.8	-13	Pass



INTERMODULATION - WCDMA

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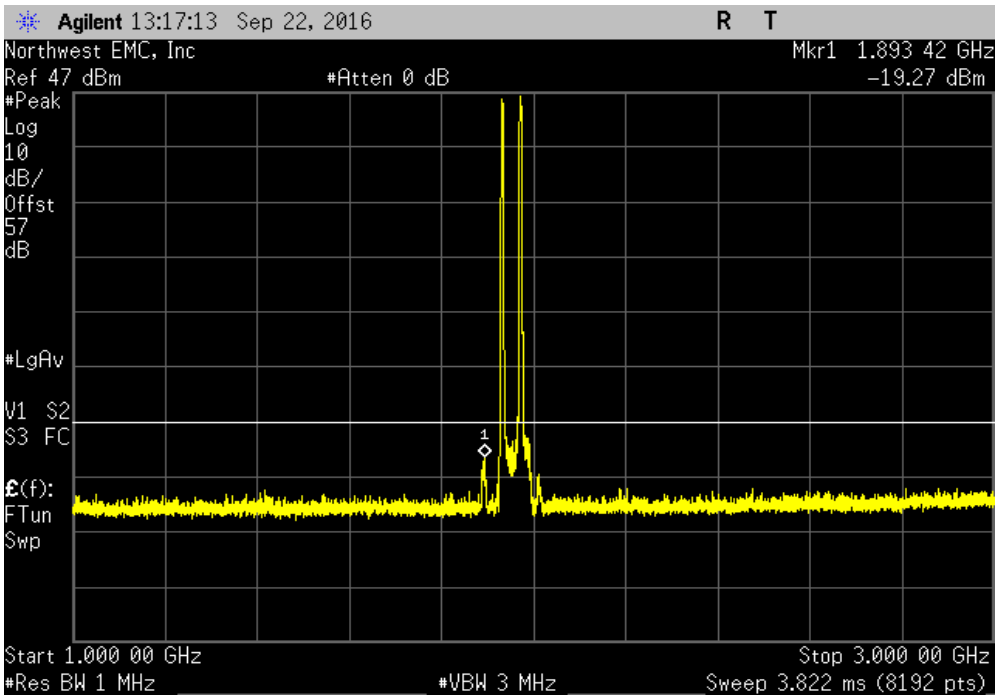
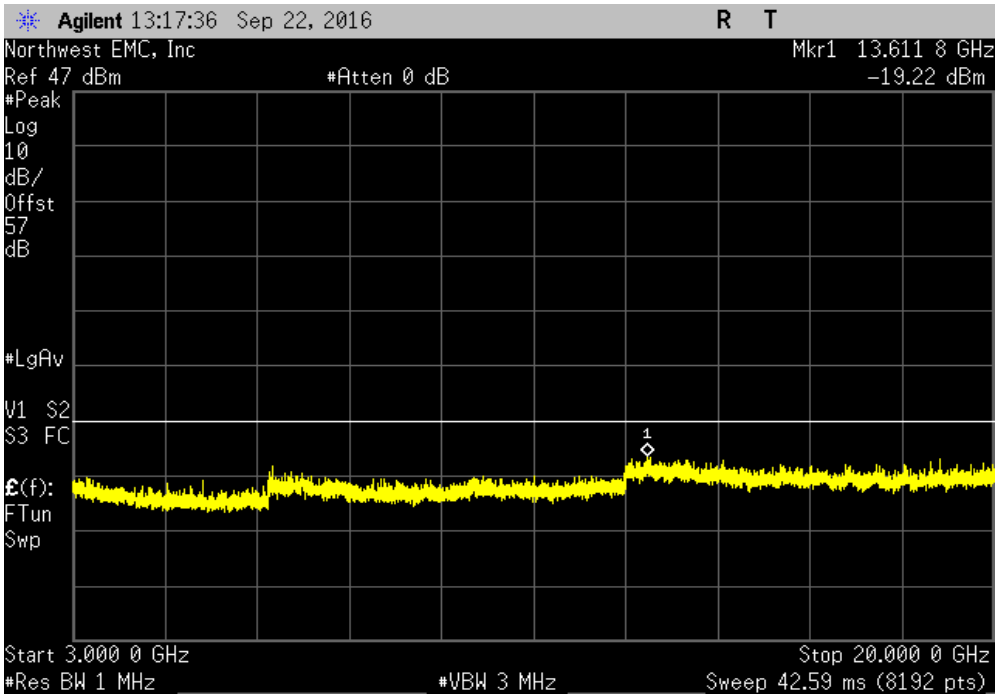
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.27	-13	Pass



Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.22	-13	Pass



INTERMODULATION - WCDMA

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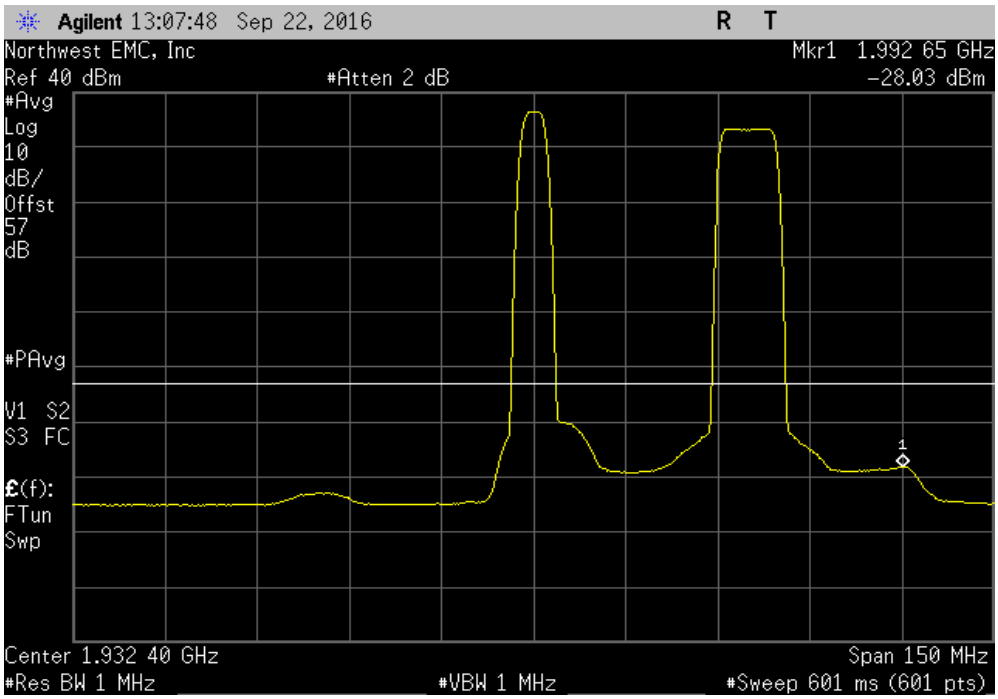
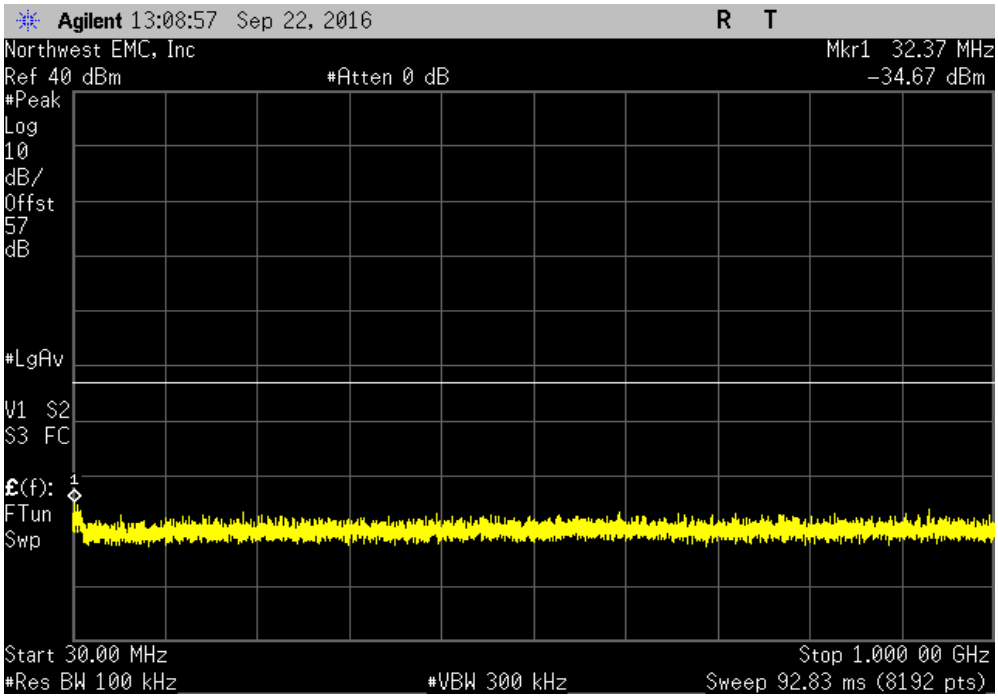
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.67	-13	Pass



INTERMODULATION - WCDMA

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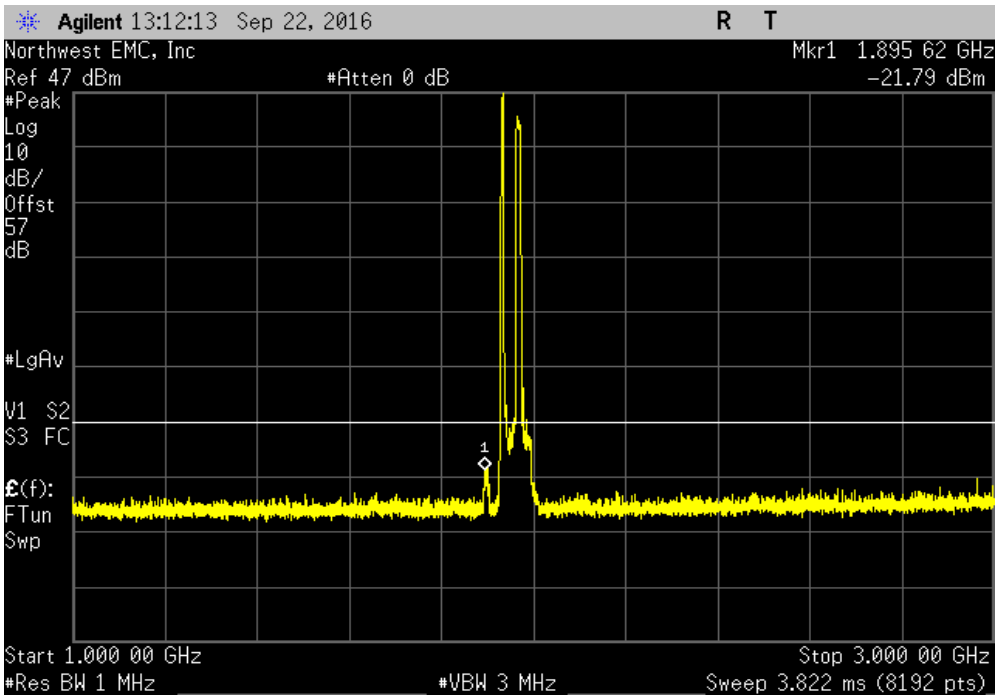
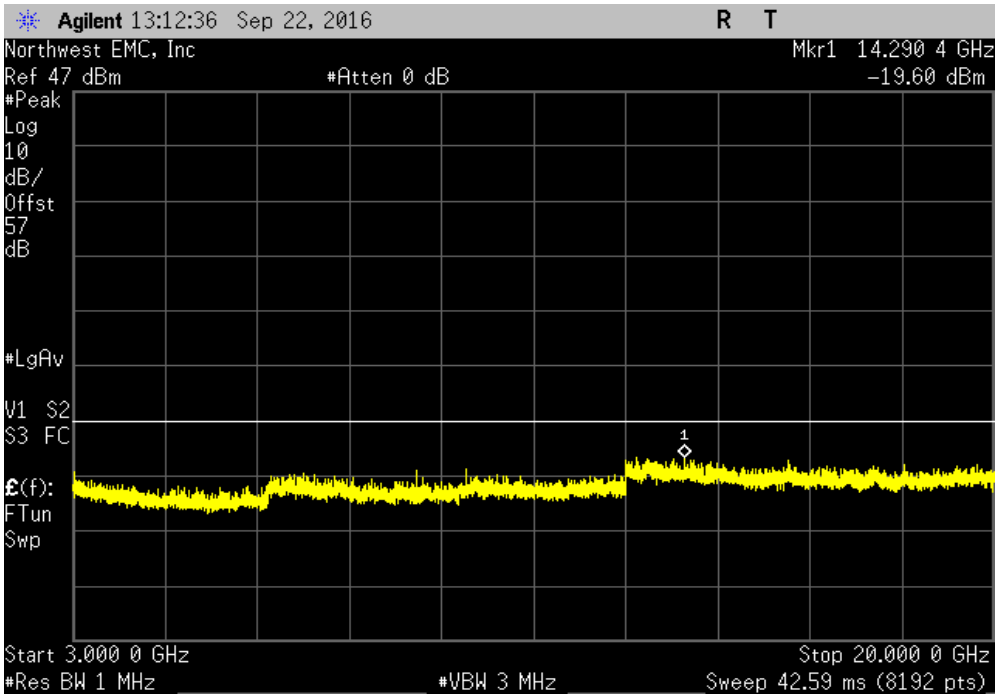
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.79	-13	Pass



Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.61	-13	Pass



INTERMODULATION - WCDMA

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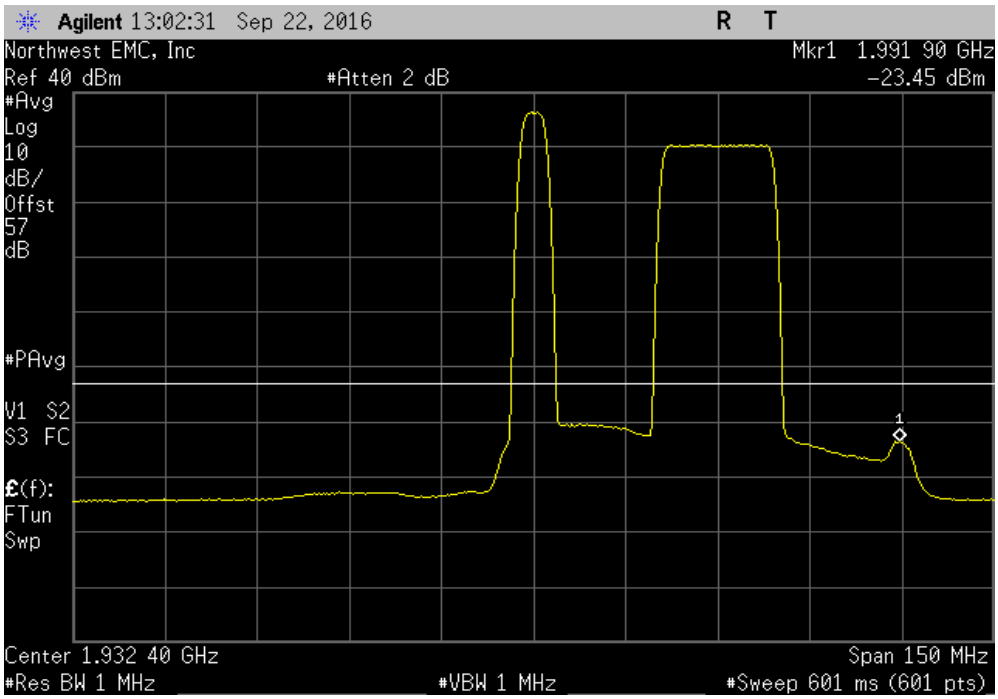
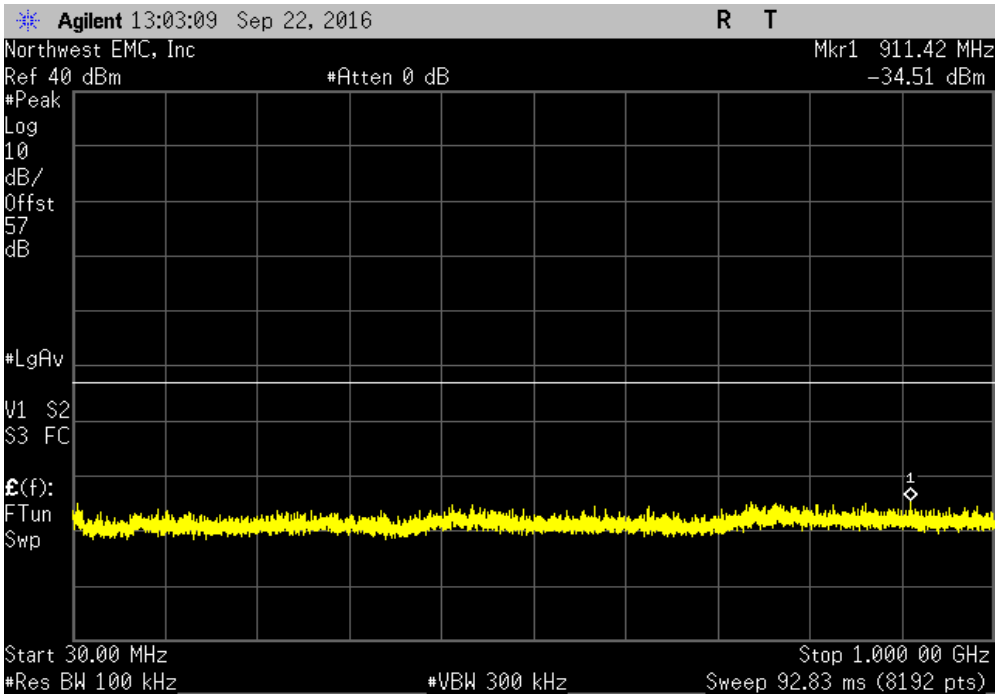
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.51	-13	Pass



INTERMODULATION - WCDMA

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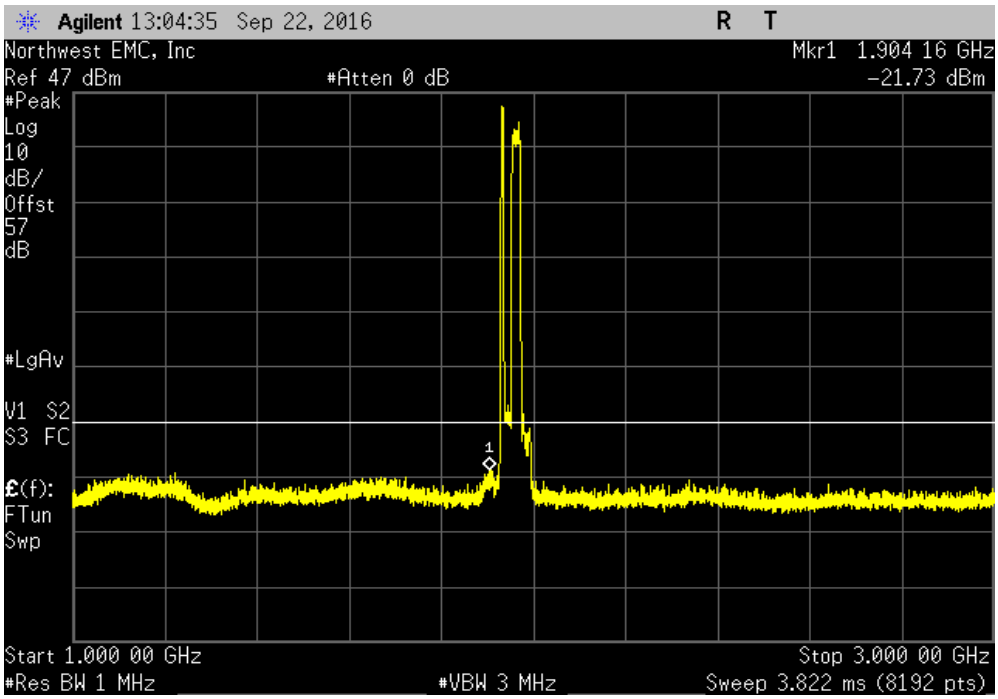
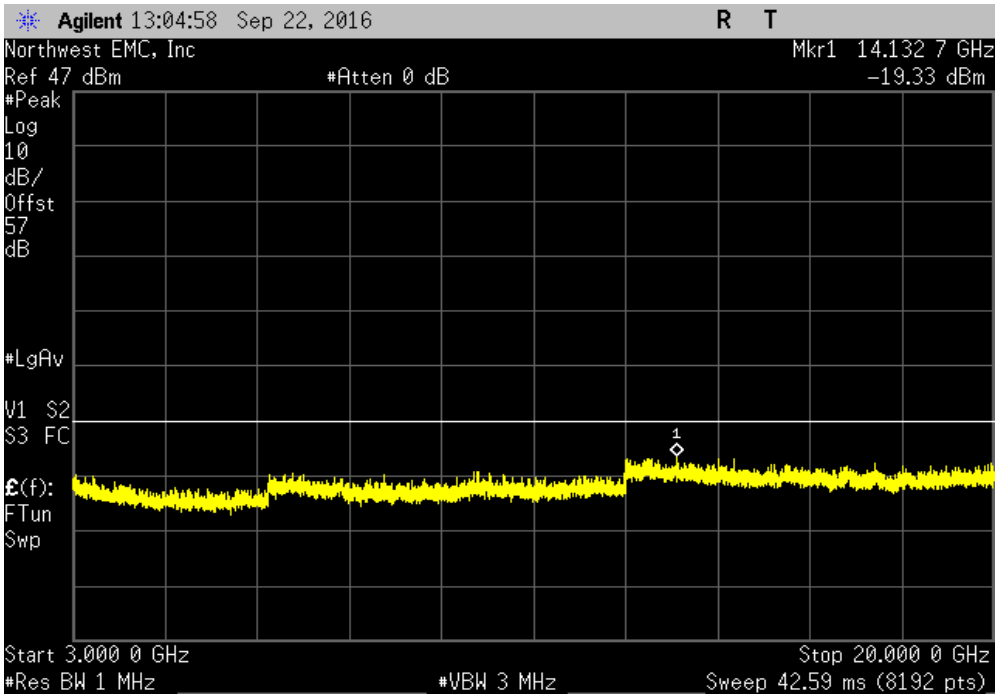
Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.73	-13	Pass



Antenna Port 1, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.33	-13	Pass

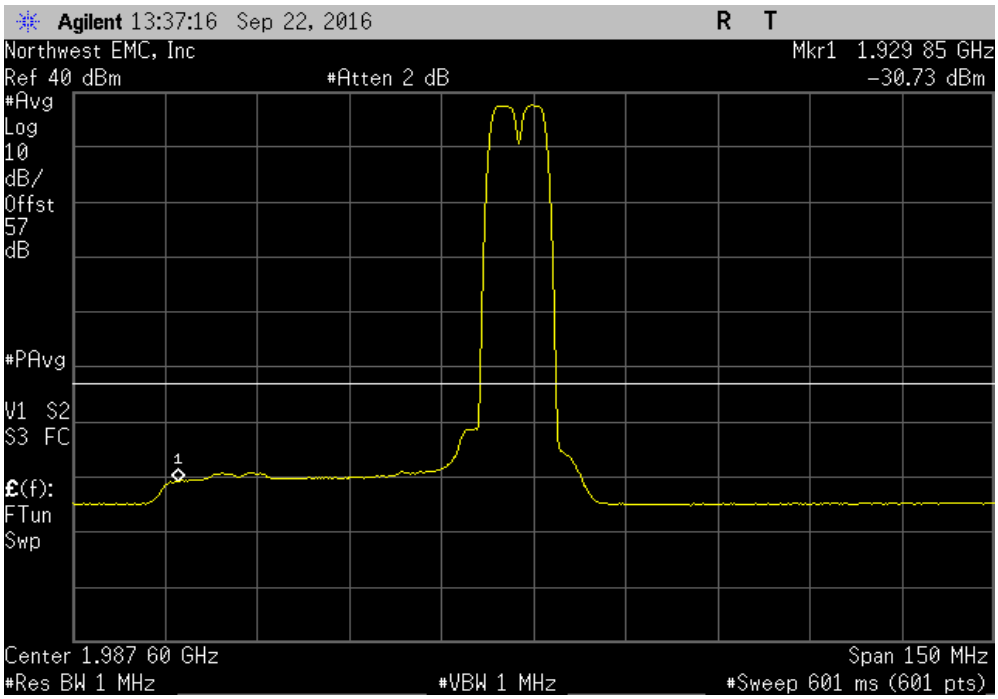


INTERMODULATION - WCDMA

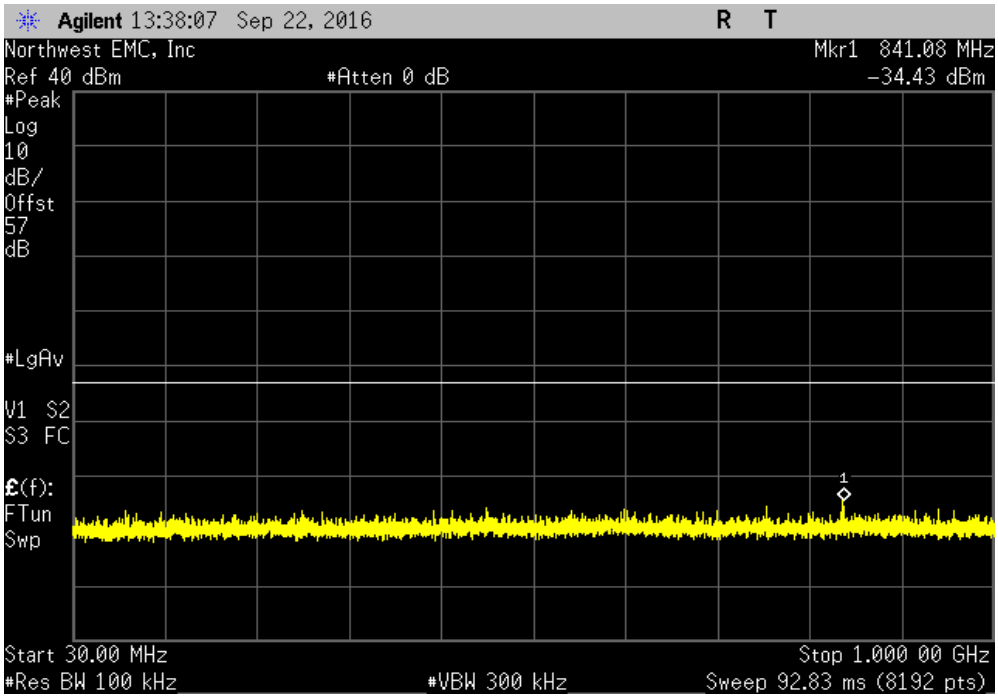
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



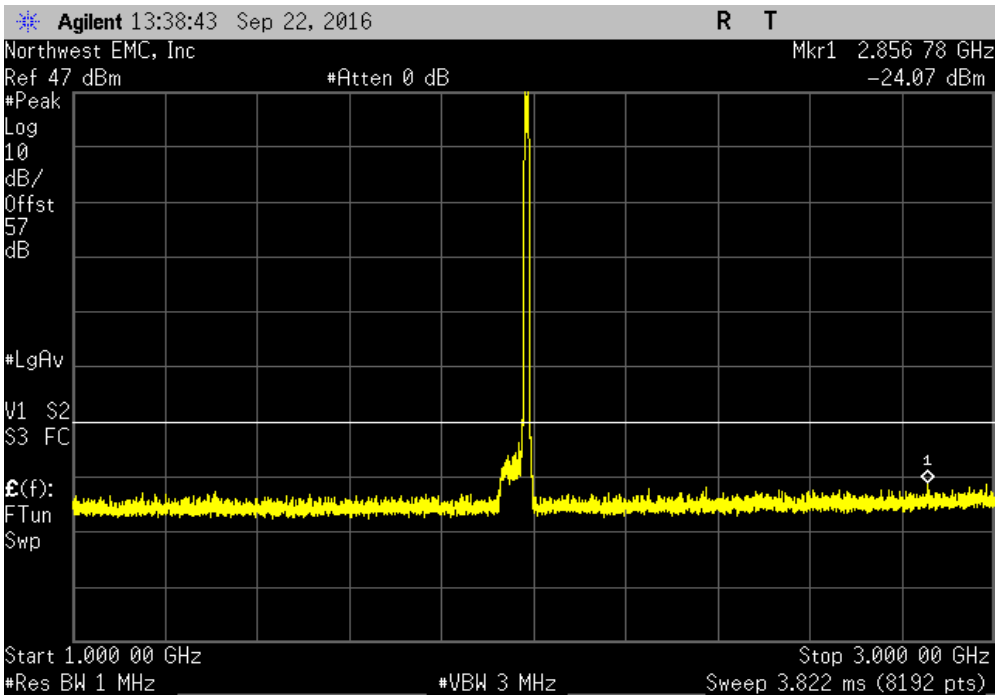
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.43	-13	Pass



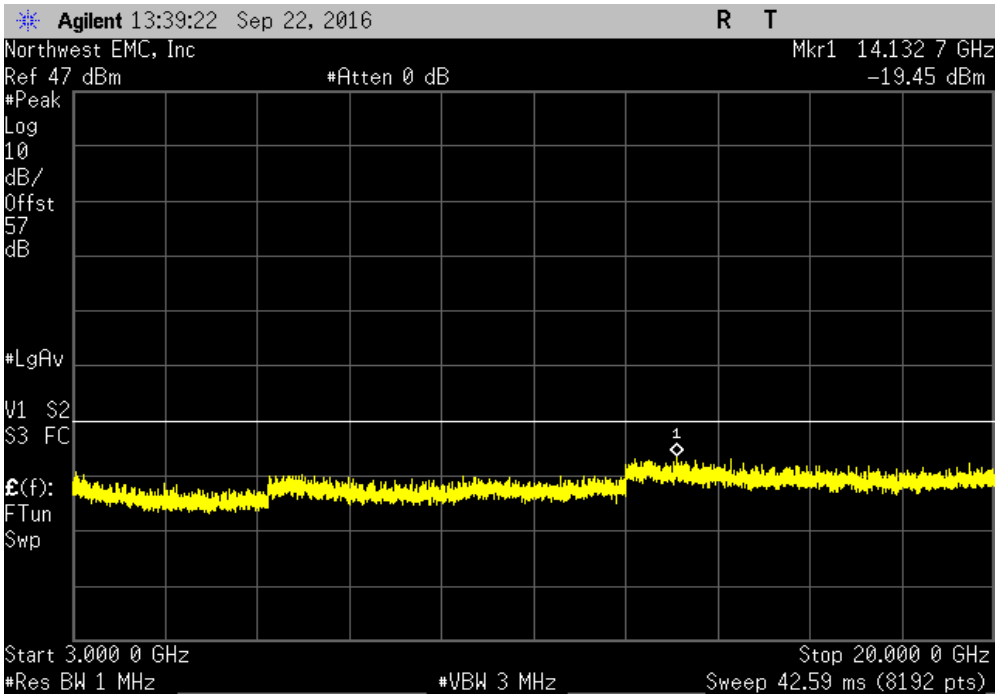
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-24.07	-13	Pass



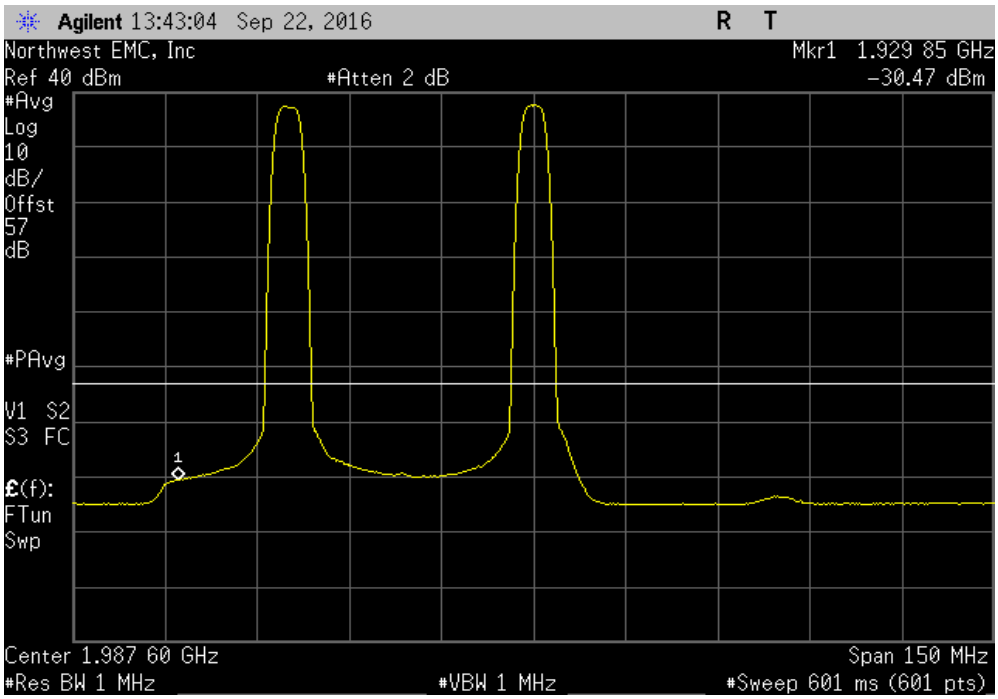
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.45	-13	Pass



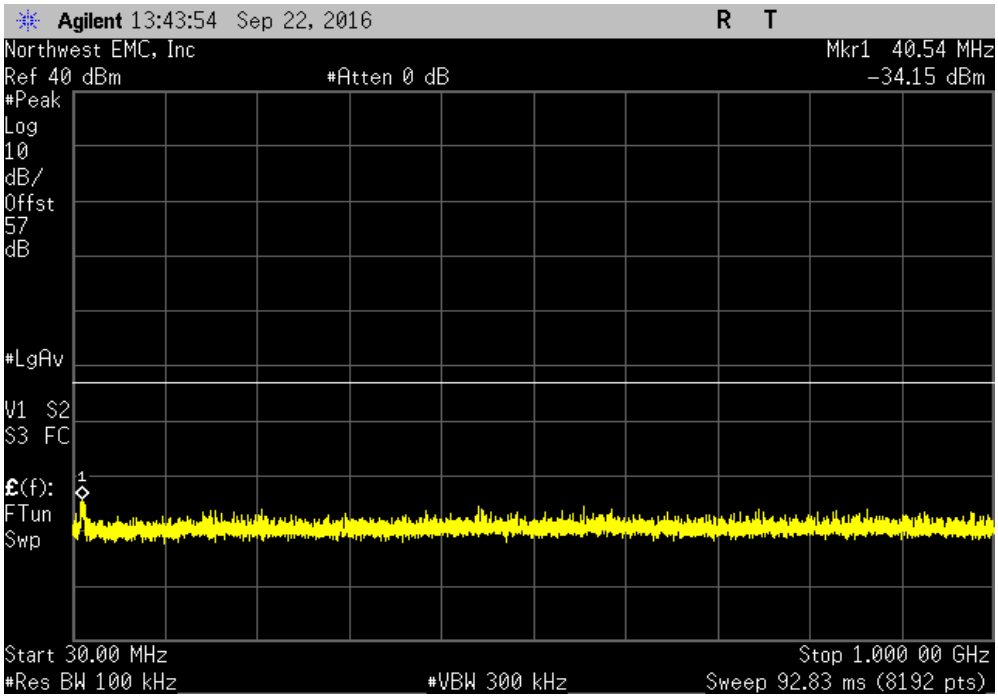
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.15	-13	Pass



INTERMODULATION - WCDMA

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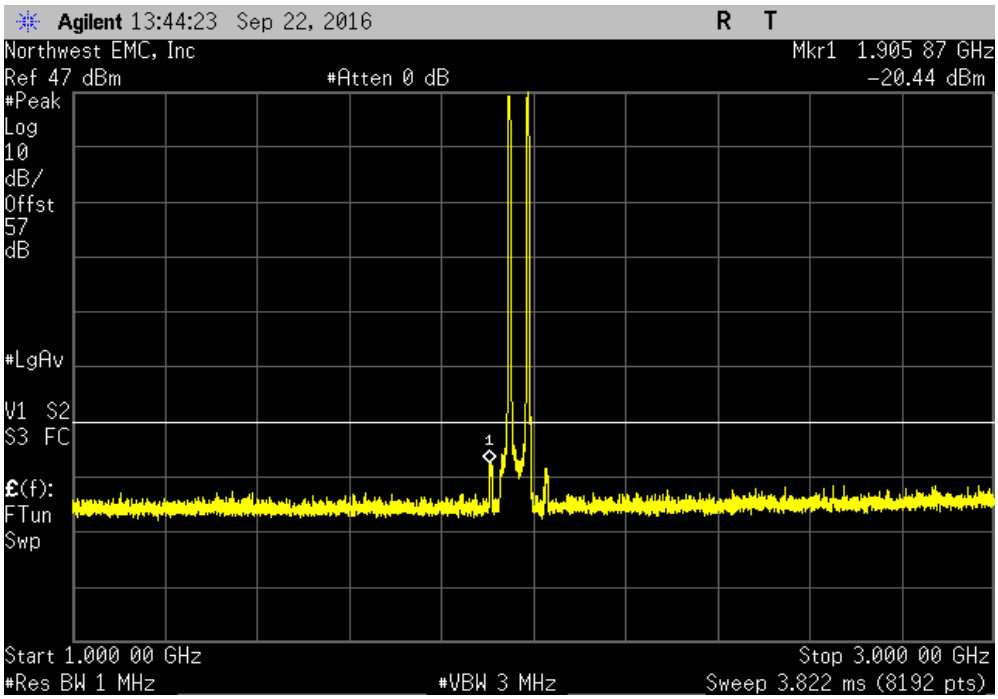
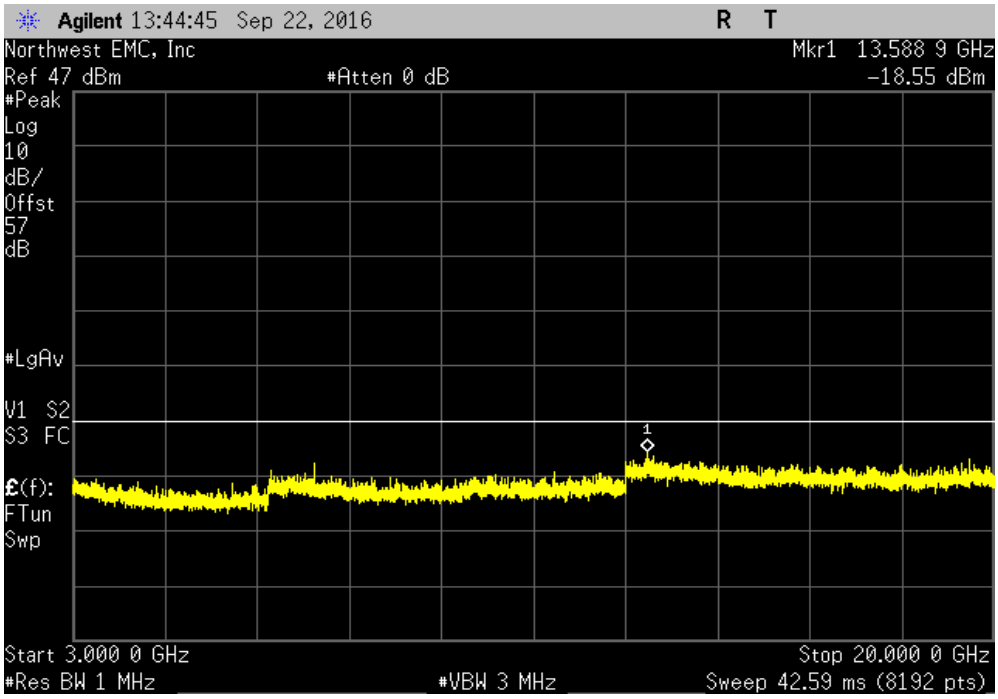
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.44	-13	Pass



Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.55	-13	Pass

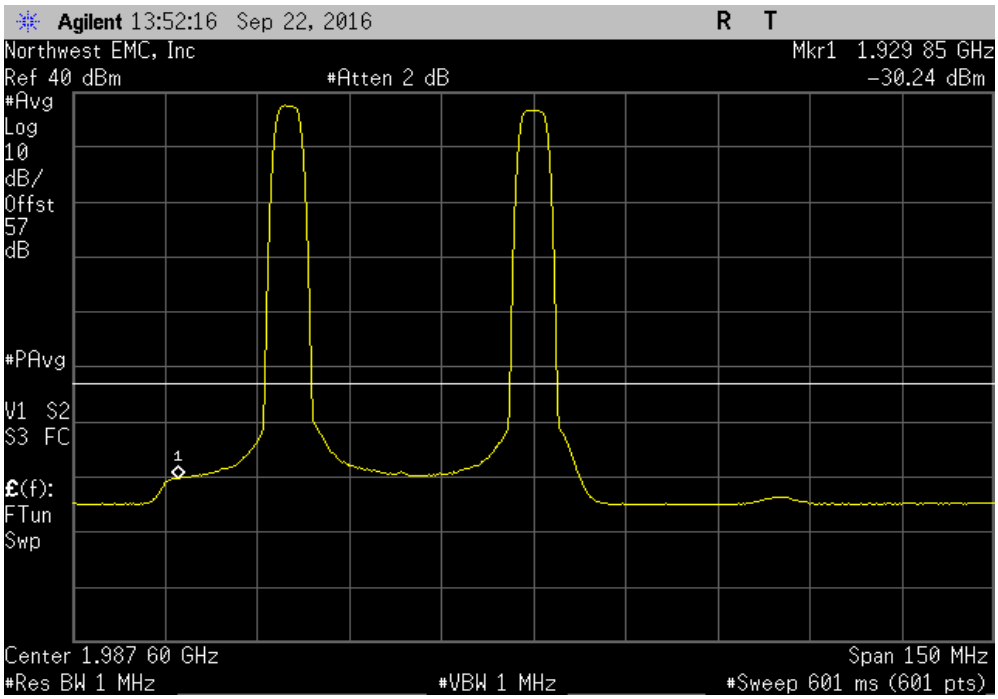


INTERMODULATION - WCDMA

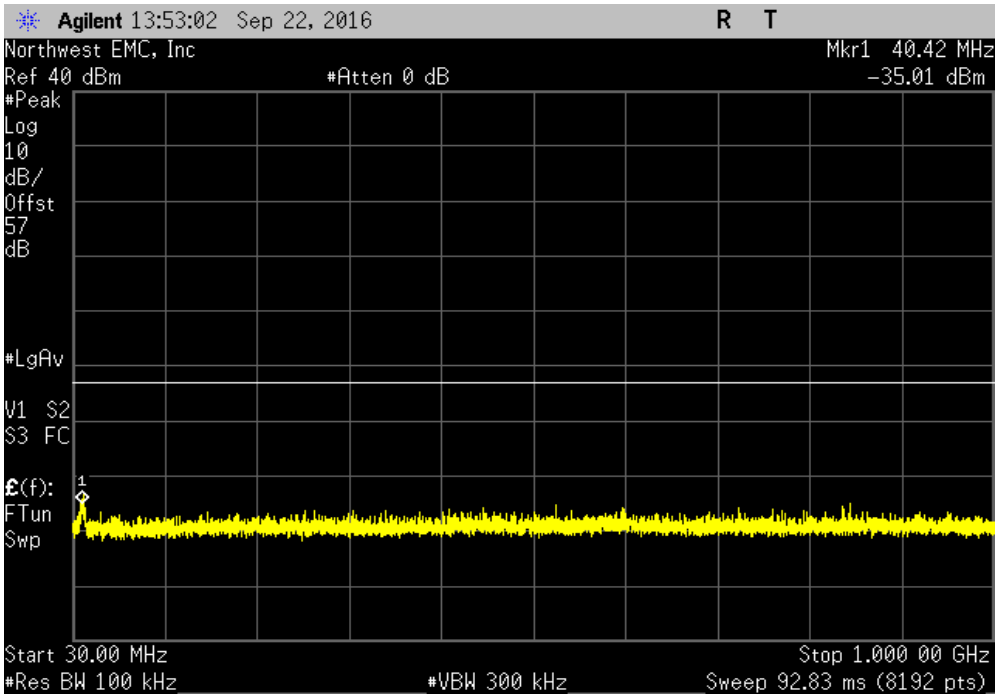
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.01	-13	Pass



INTERMODULATION - WCDMA

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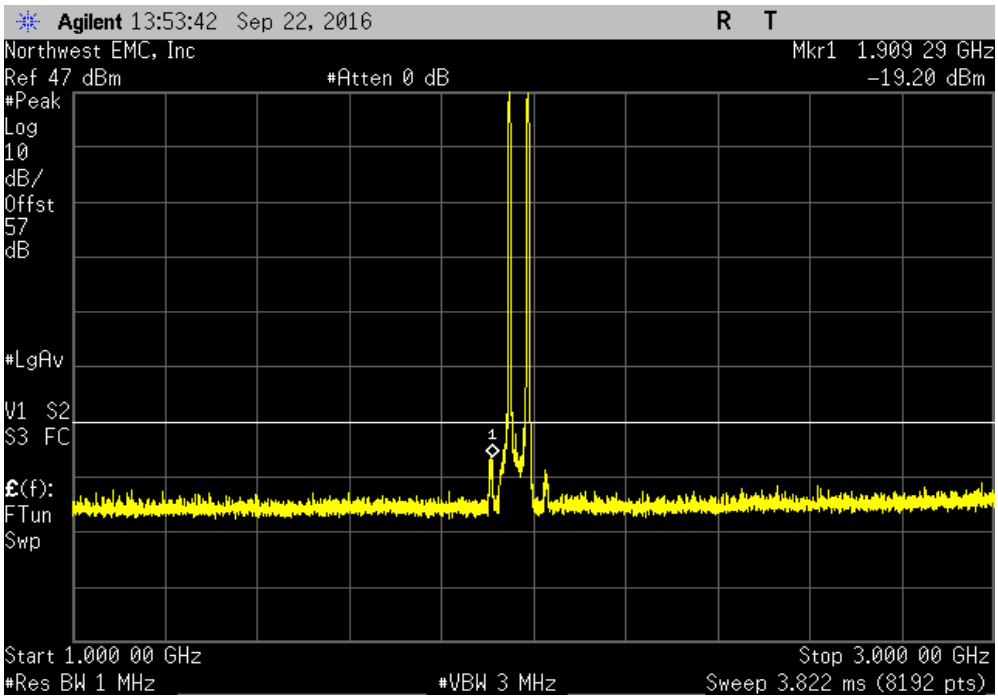
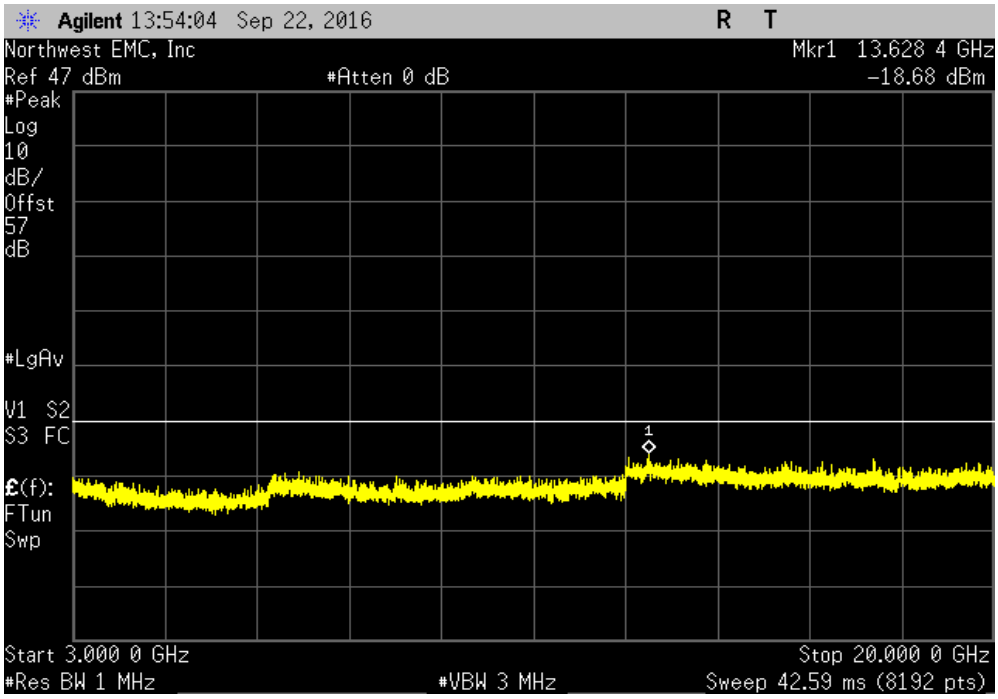
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.2	-13	Pass



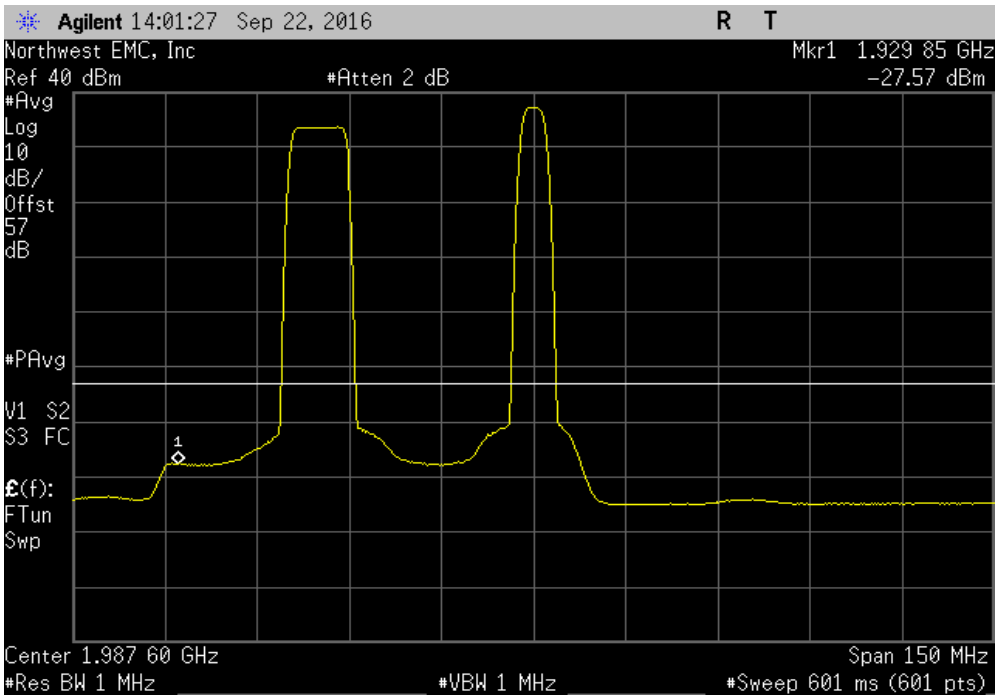
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.68	-13	Pass



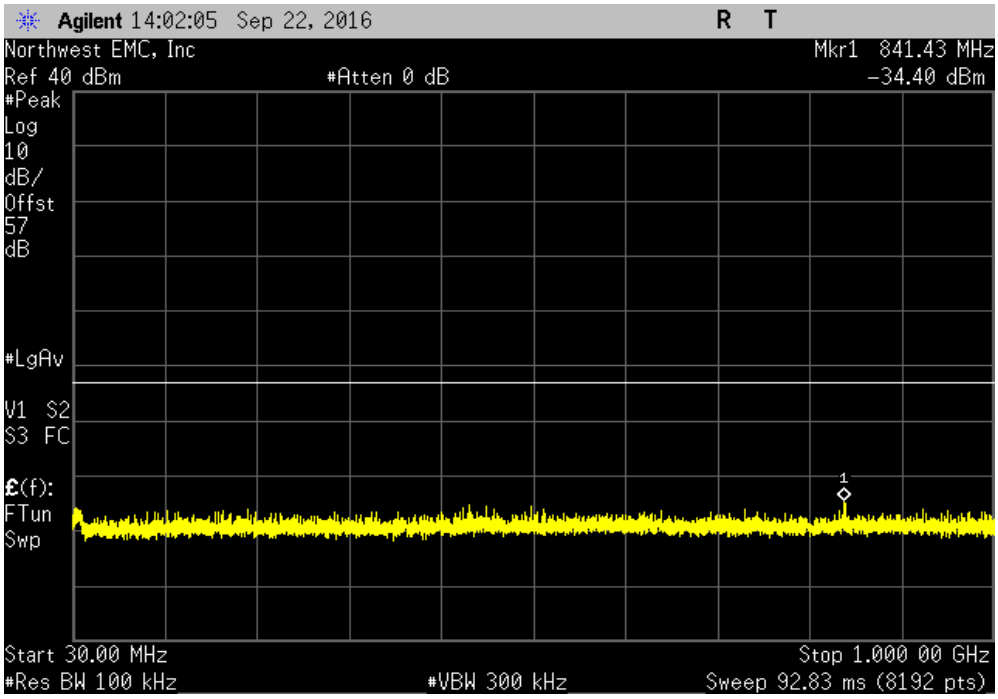
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.4	-13	Pass



INTERMODULATION - WCDMA

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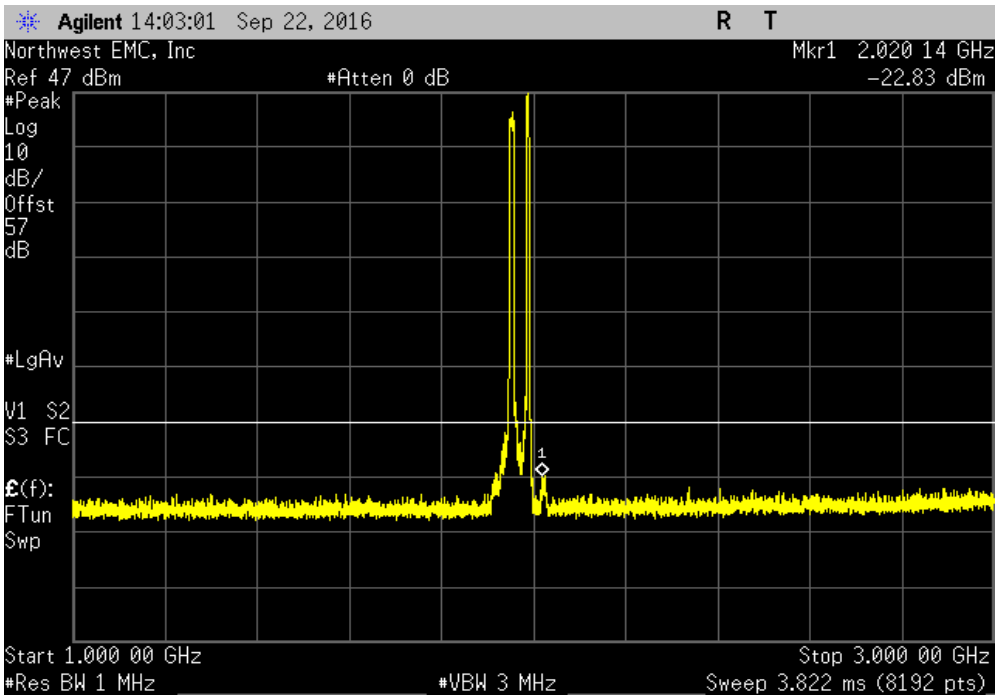
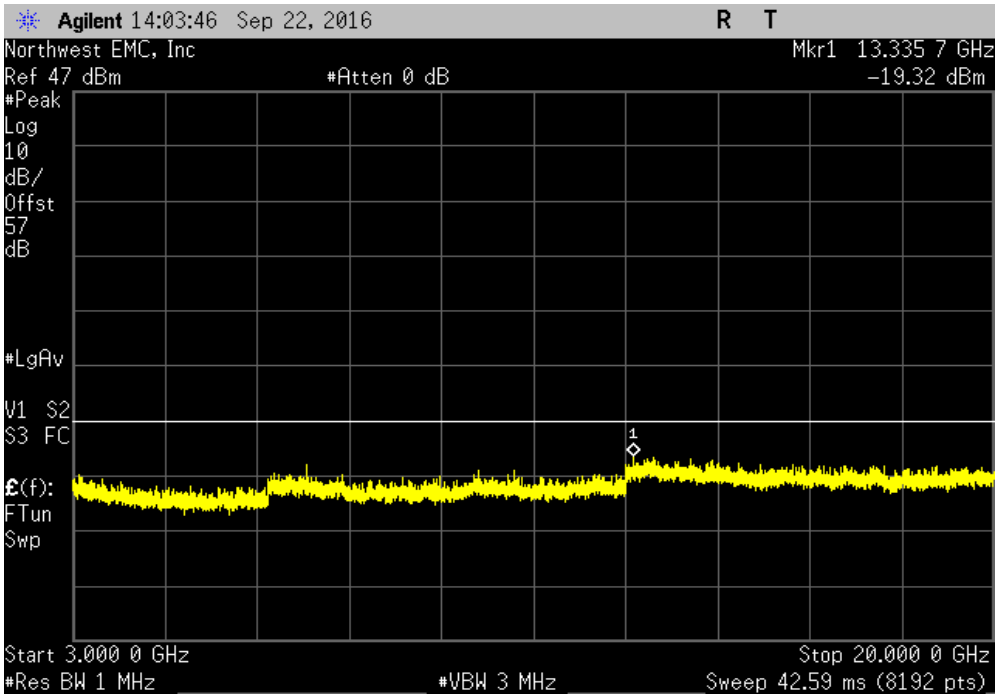
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-22.83	-13	Pass



Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.32	-13	Pass

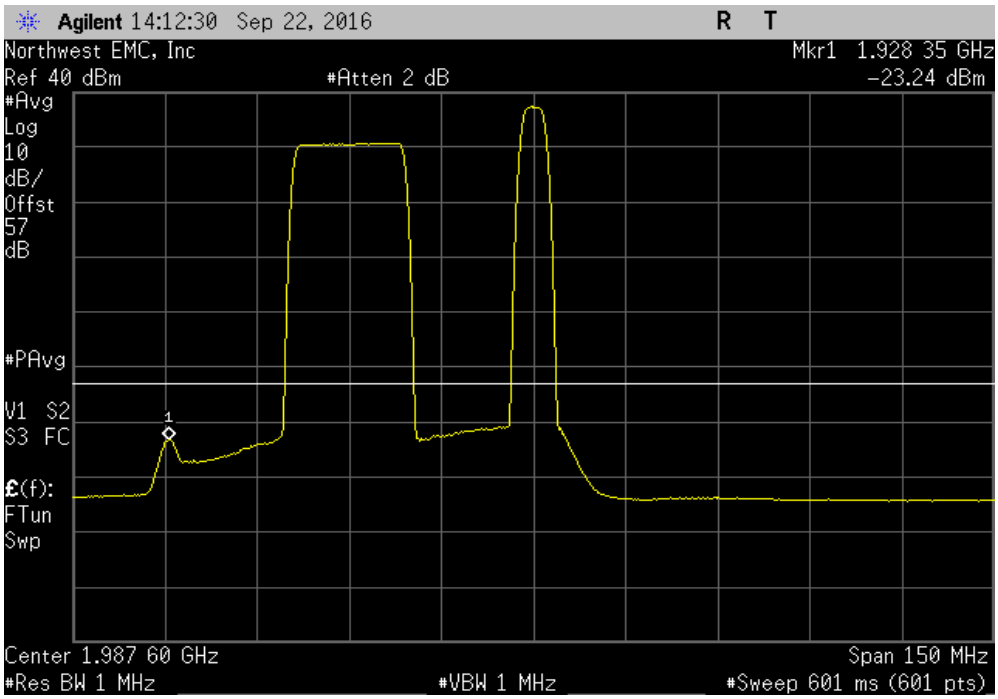


INTERMODULATION - WCDMA

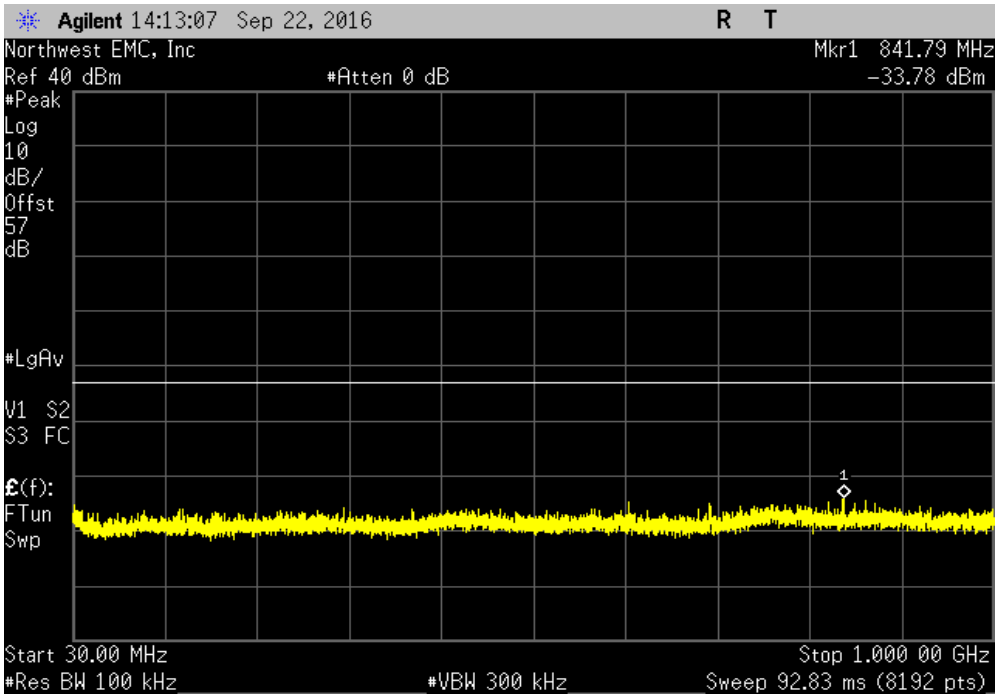
NORTHWEST EMC

XMit 2016.05.06

Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



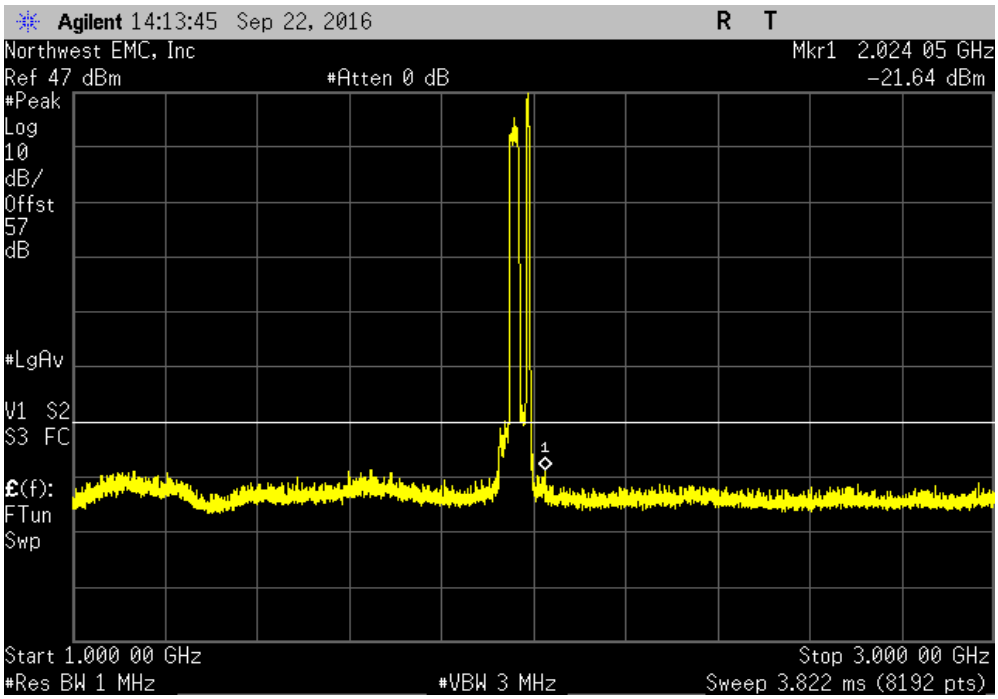
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.78	-13	Pass



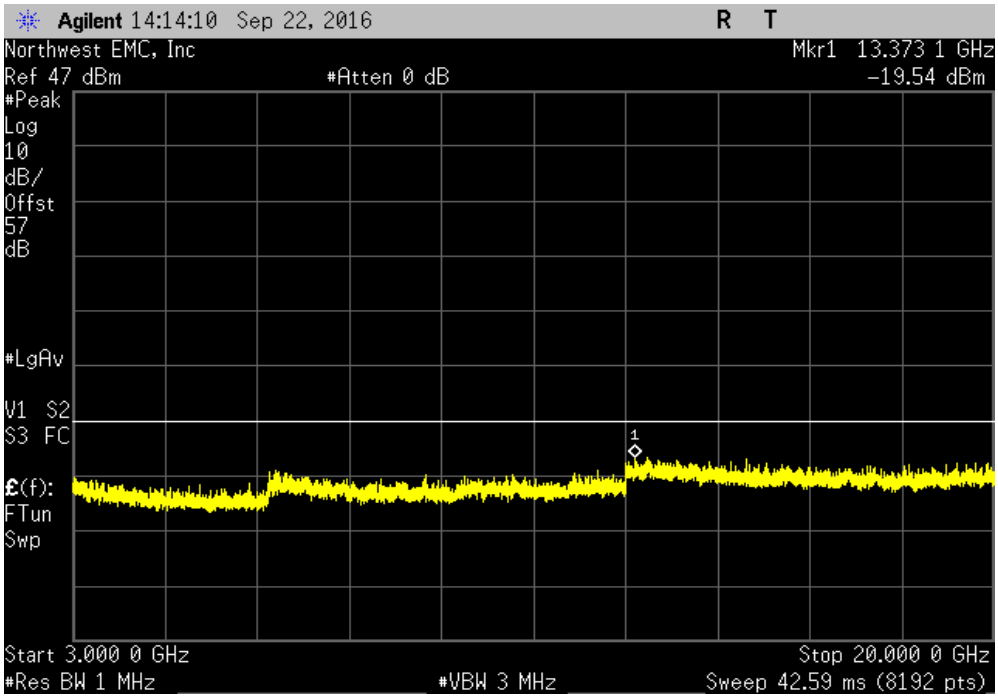
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.64	-13	Pass



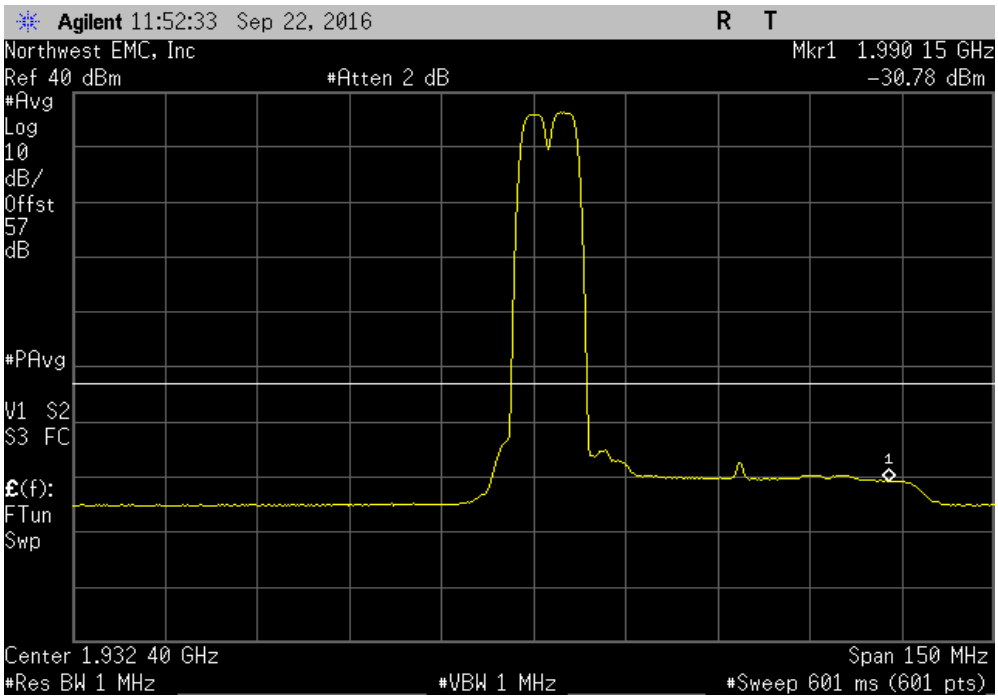
Antenna Port 1, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.54	-13	Pass



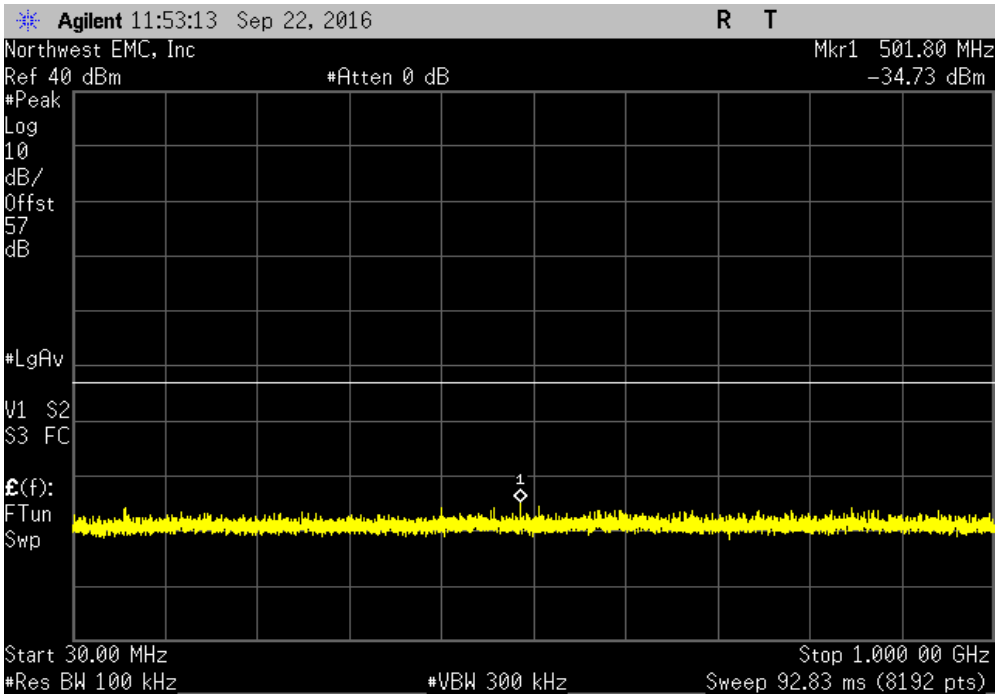
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.73	-13	Pass



INTERMODULATION - WCDMA

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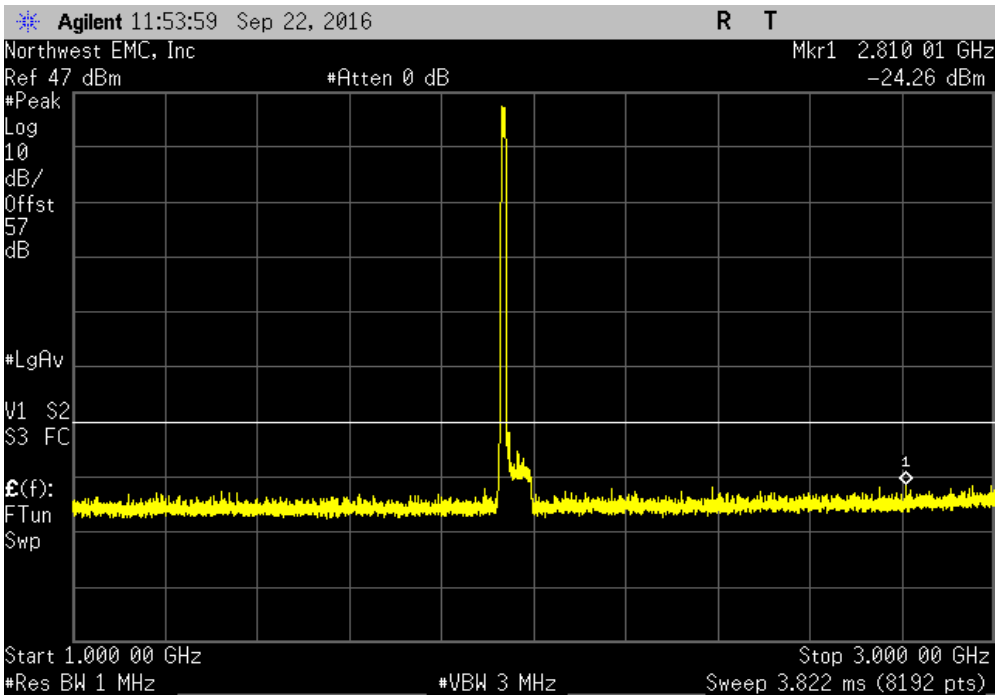
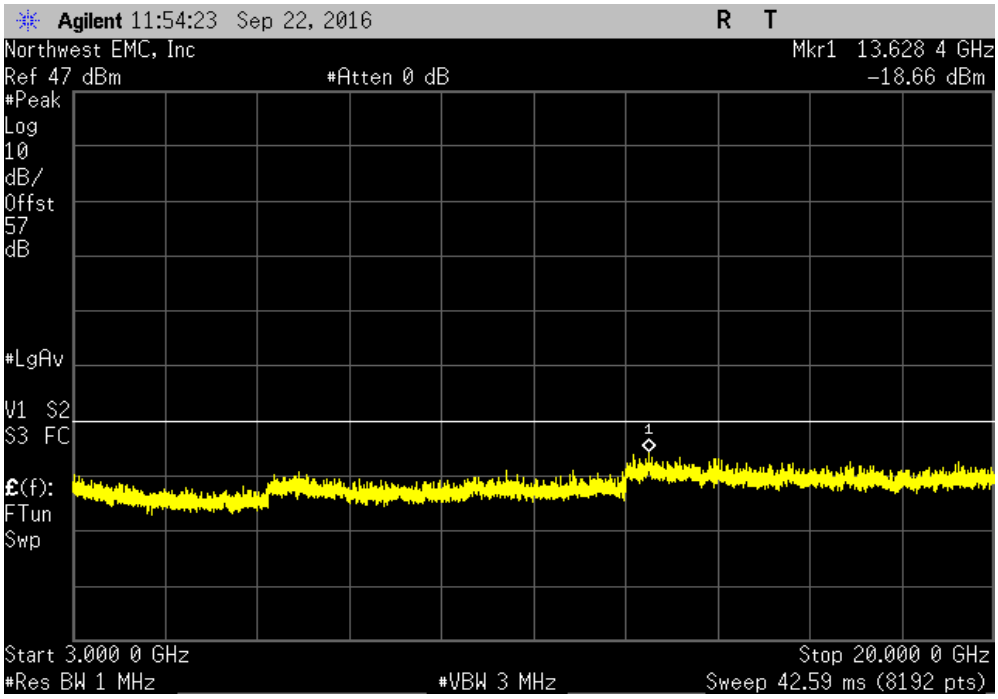
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-24.26	-13	Pass



Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1937.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.66	-13	Pass



INTERMODULATION - WCDMA

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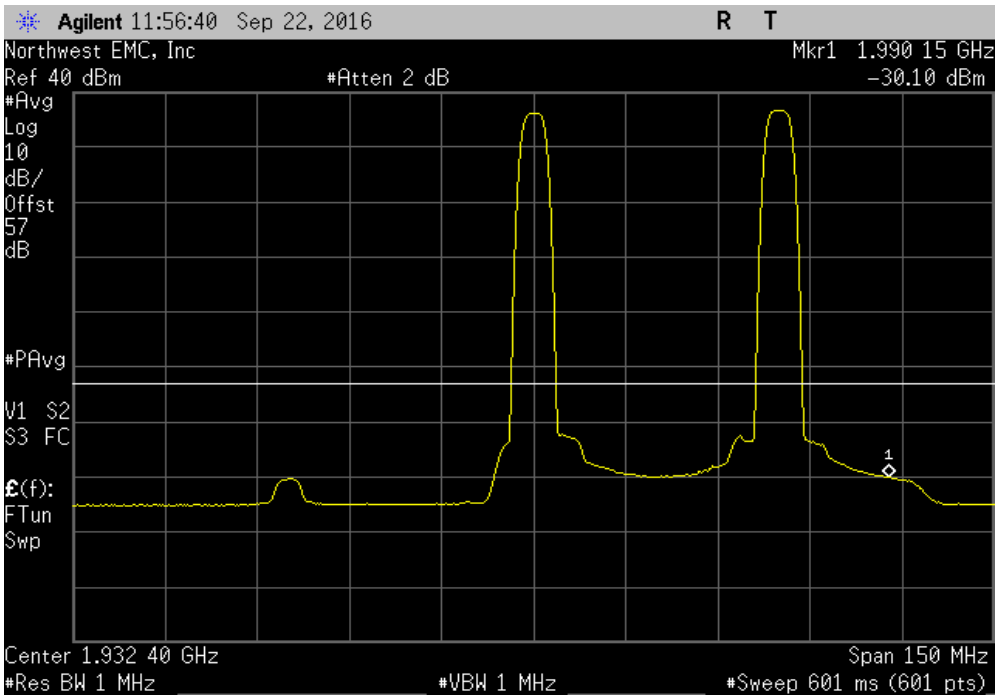
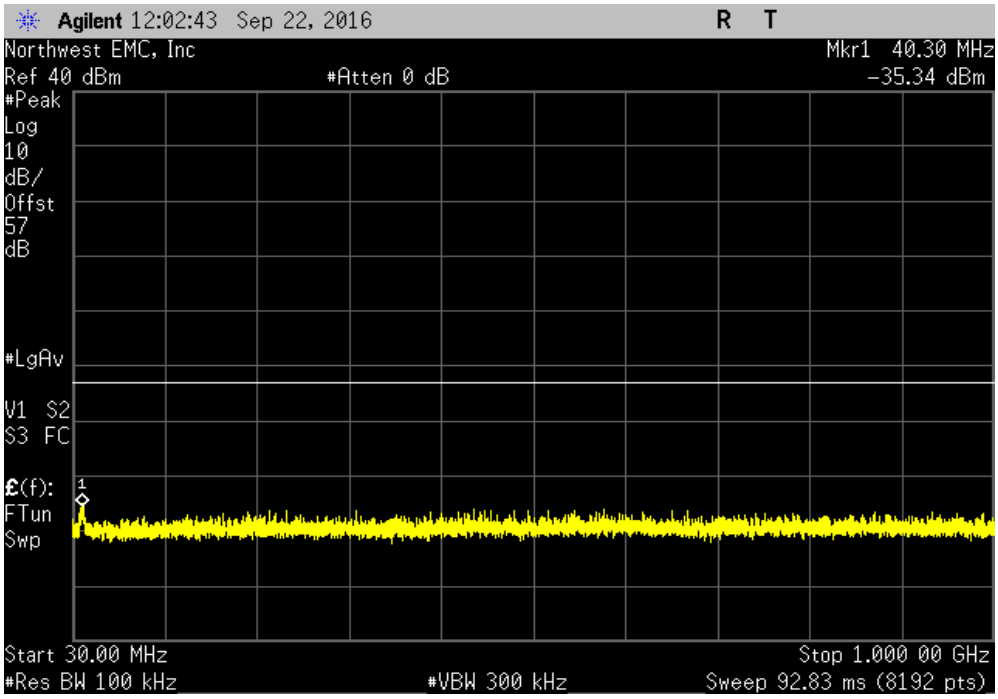
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



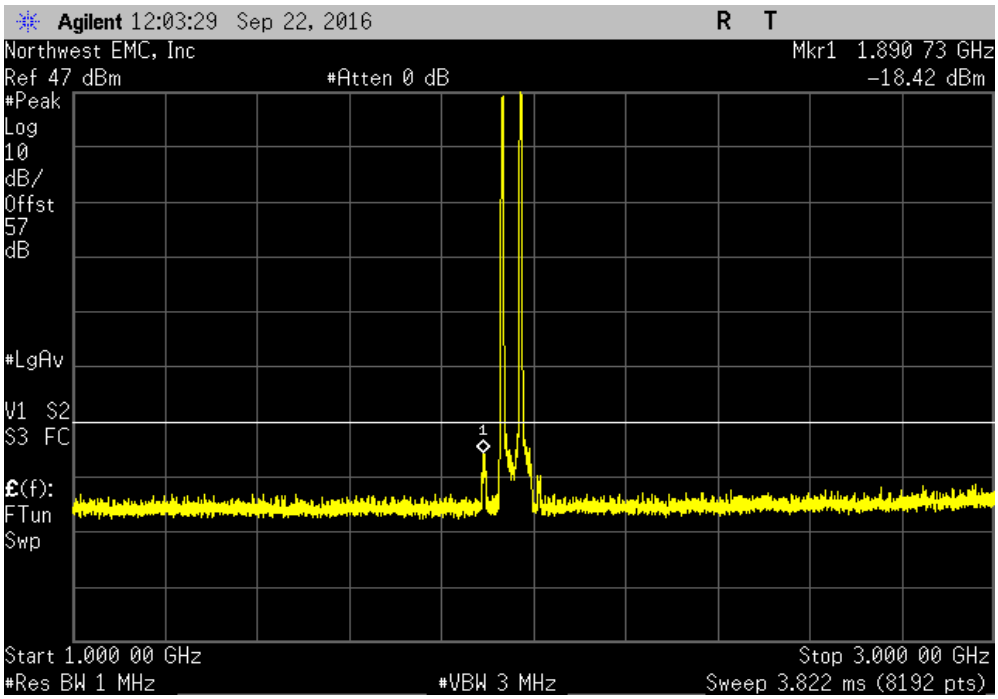
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.34	-13	Pass



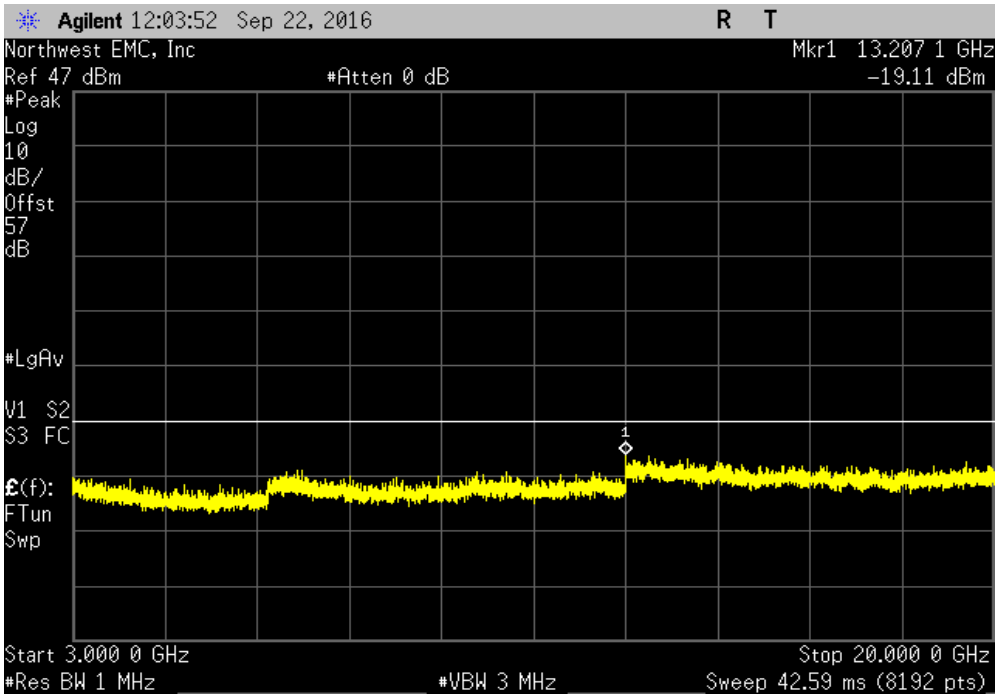
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-18.42	-13	Pass



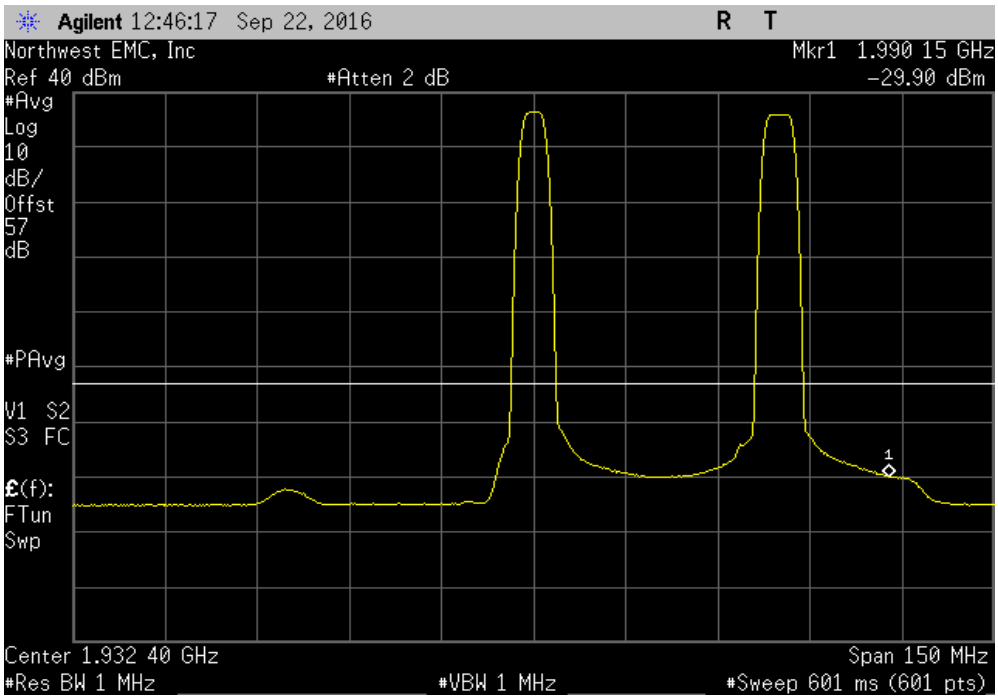
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & WCDMA 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.11	-13	Pass



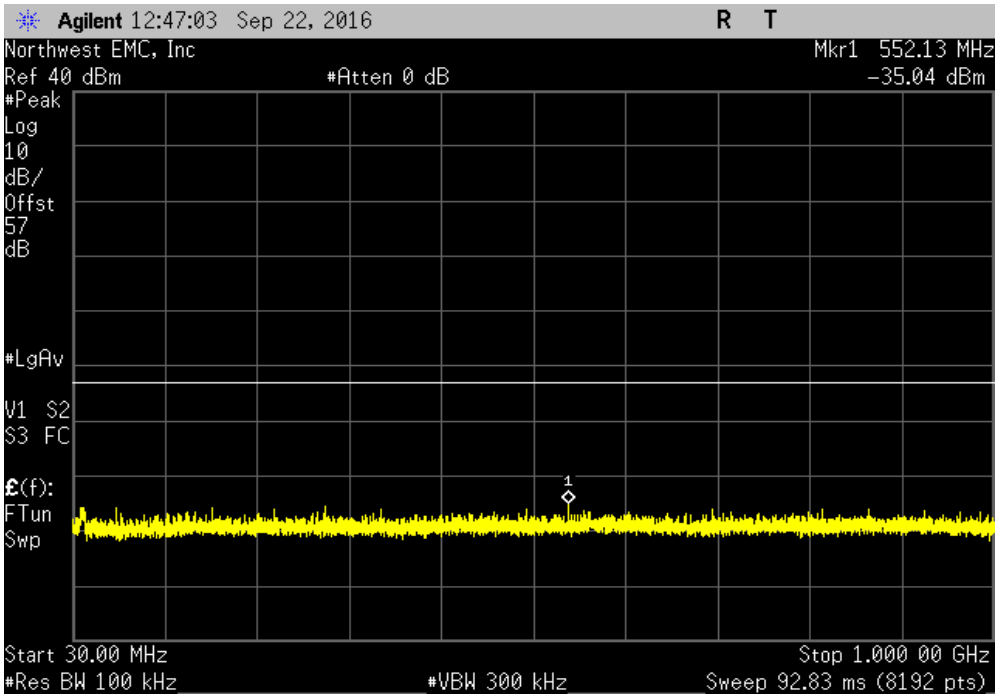
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



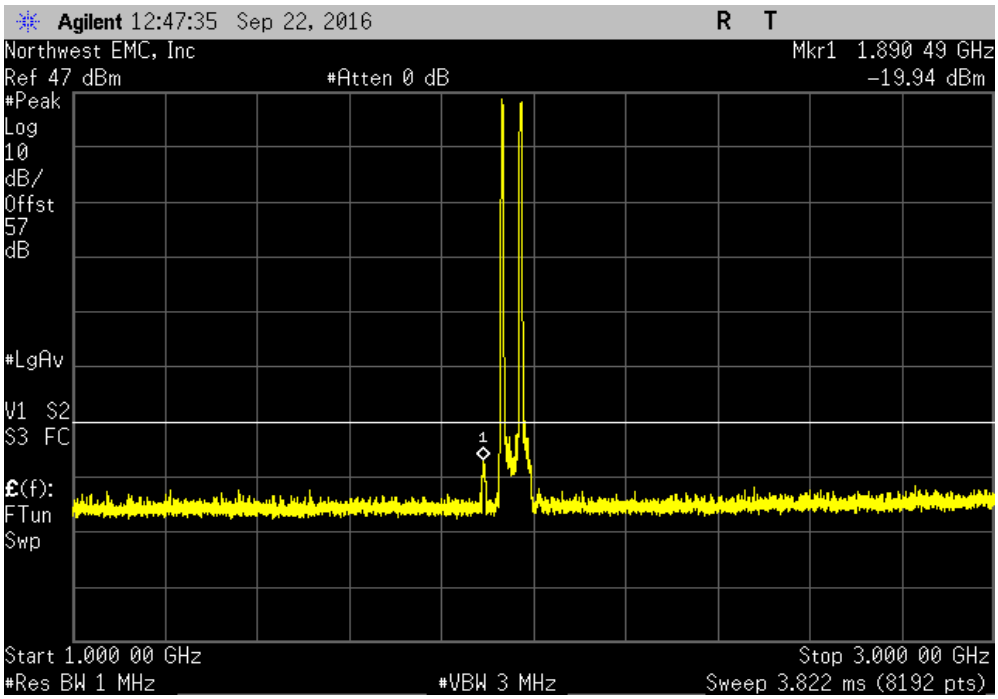
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.04	-13	Pass



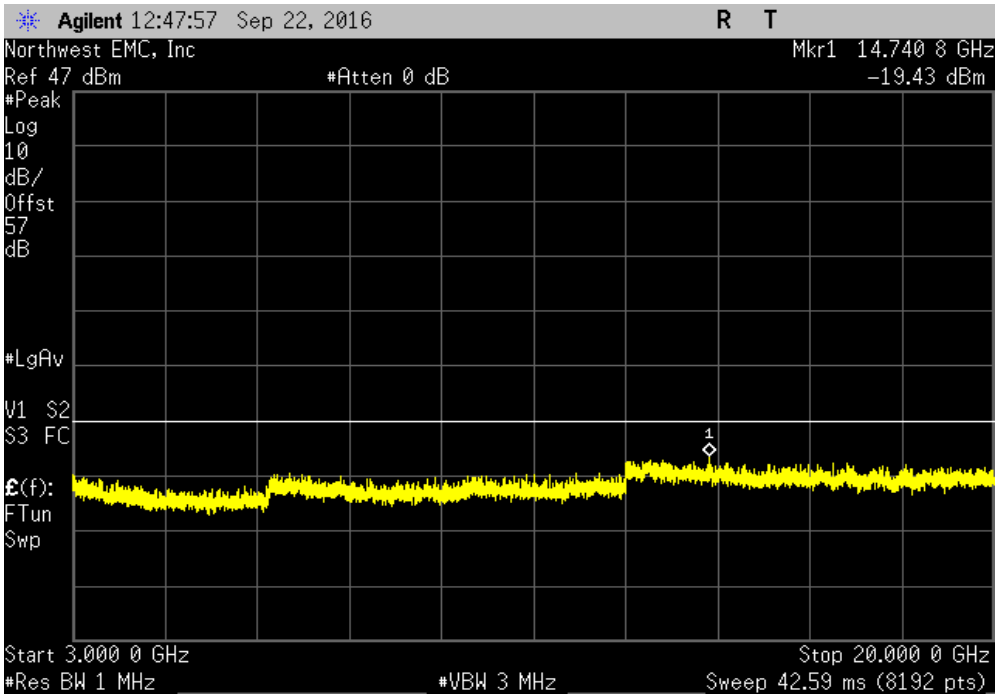
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.94	-13	Pass



Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE5 1972.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.43	-13	Pass



INTERMODULATION - WCDMA

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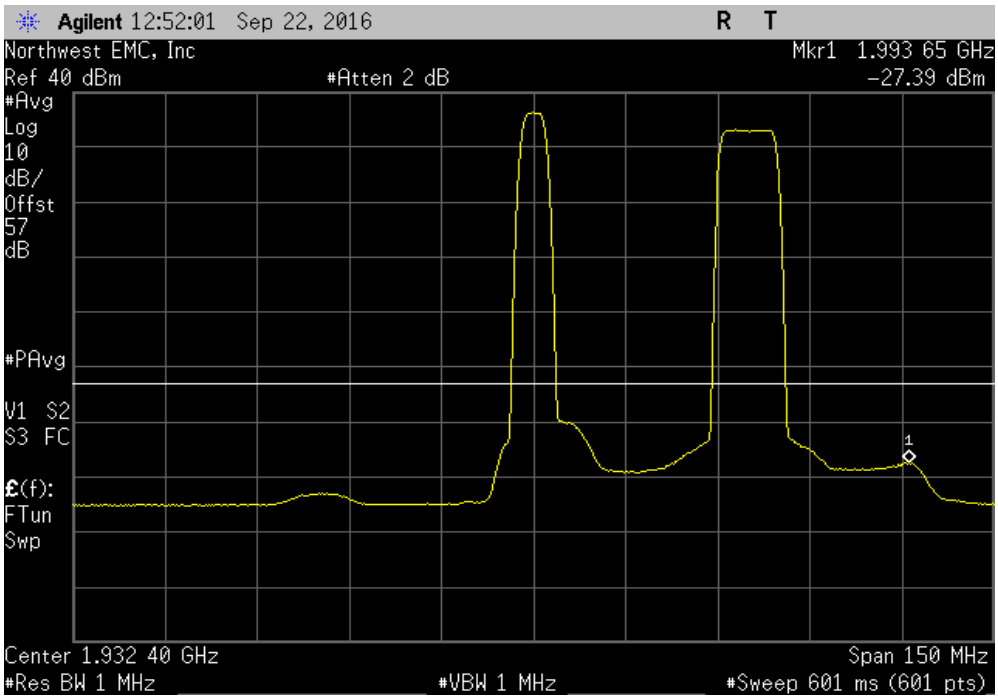
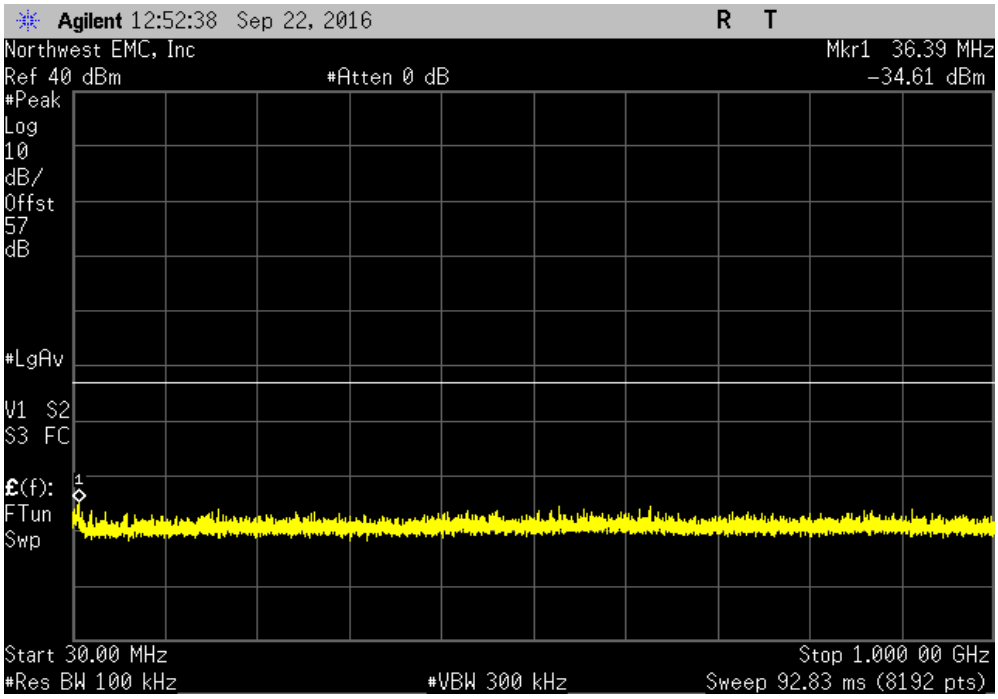
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



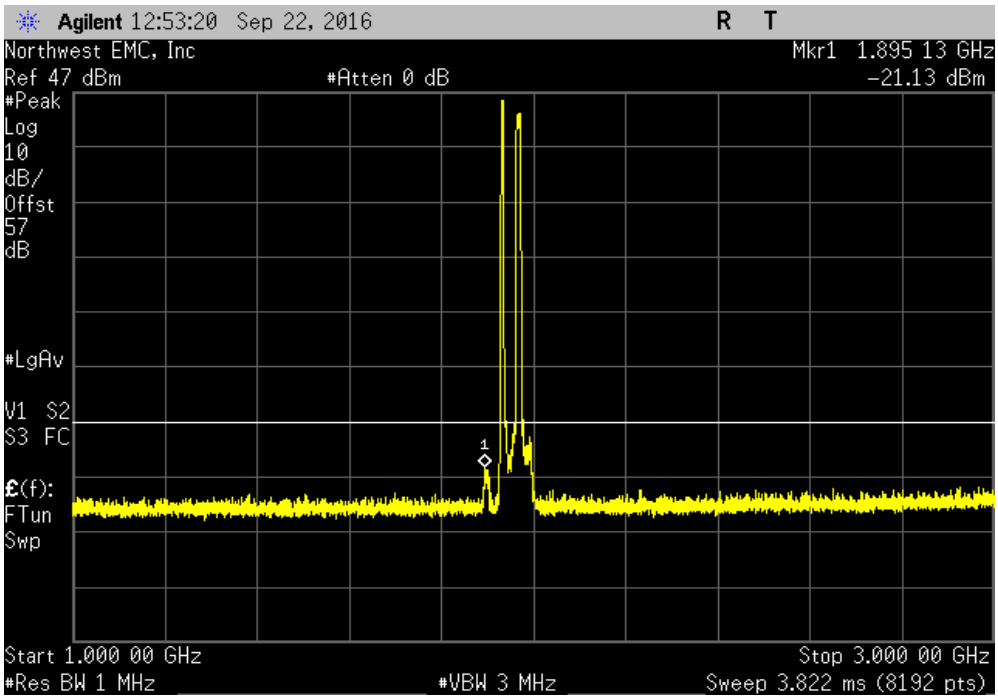
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.61	-13	Pass



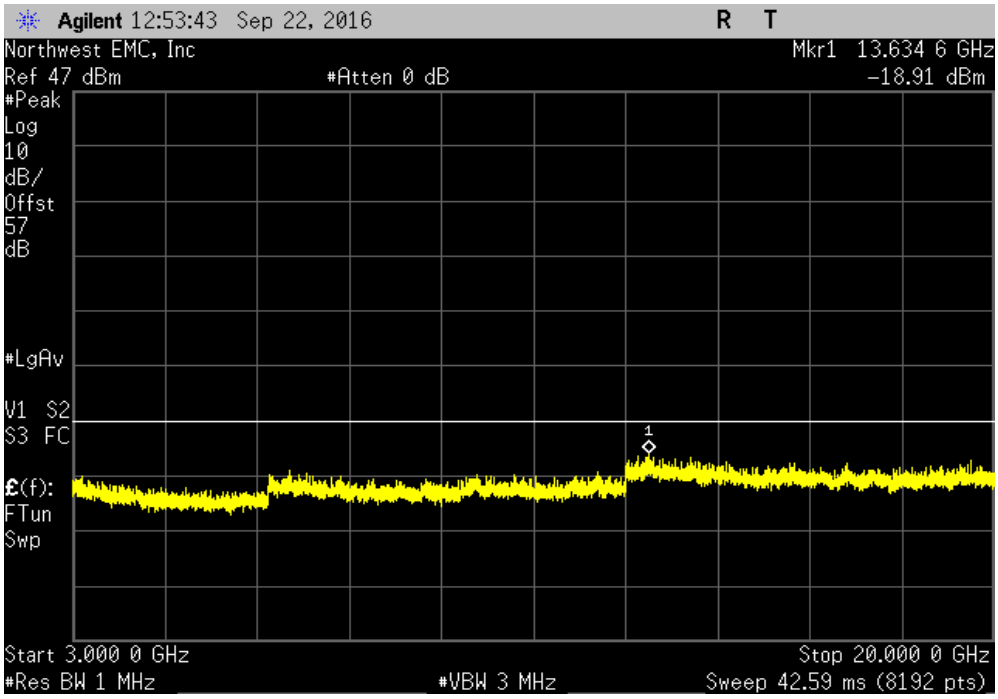
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.13	-13	Pass



Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE10 1967.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.91	-13	Pass



INTERMODULATION - WCDMA

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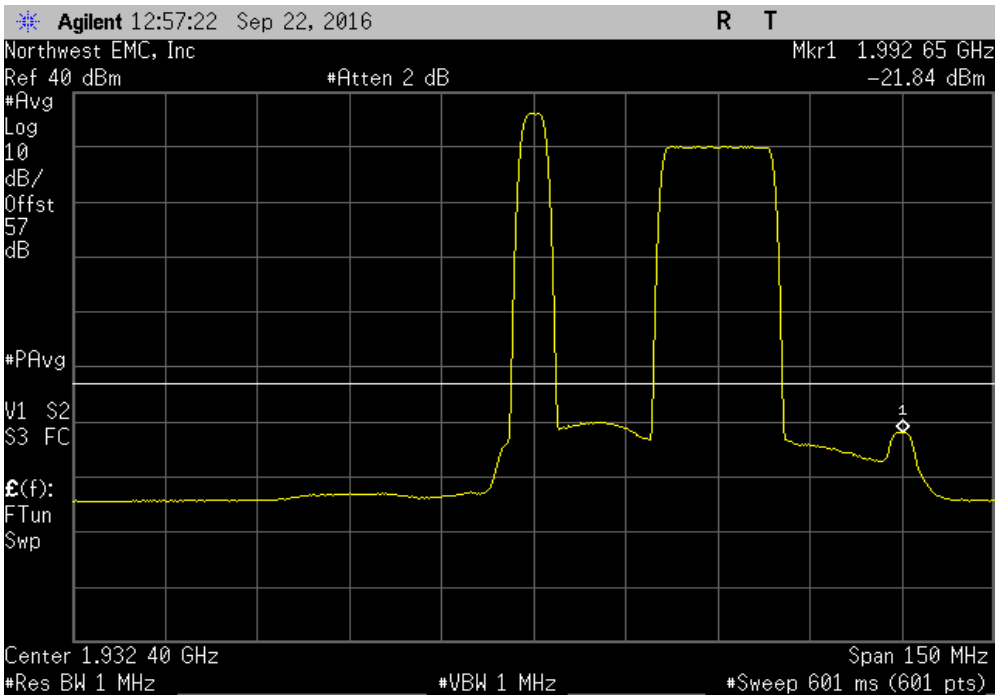
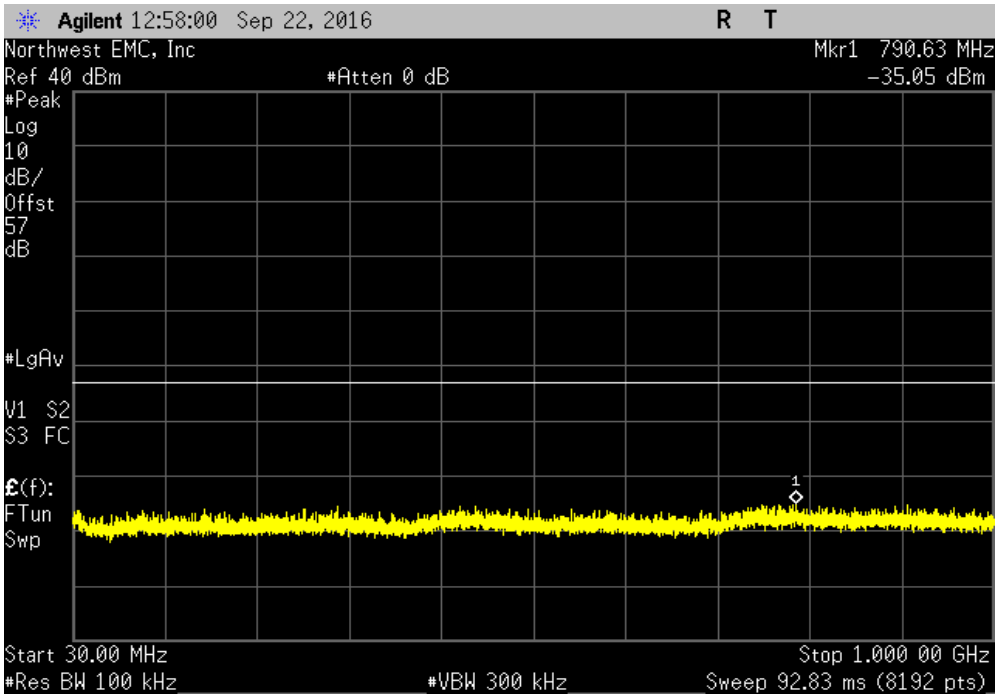
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.05	-13	Pass



INTERMODULATION - WCDMA

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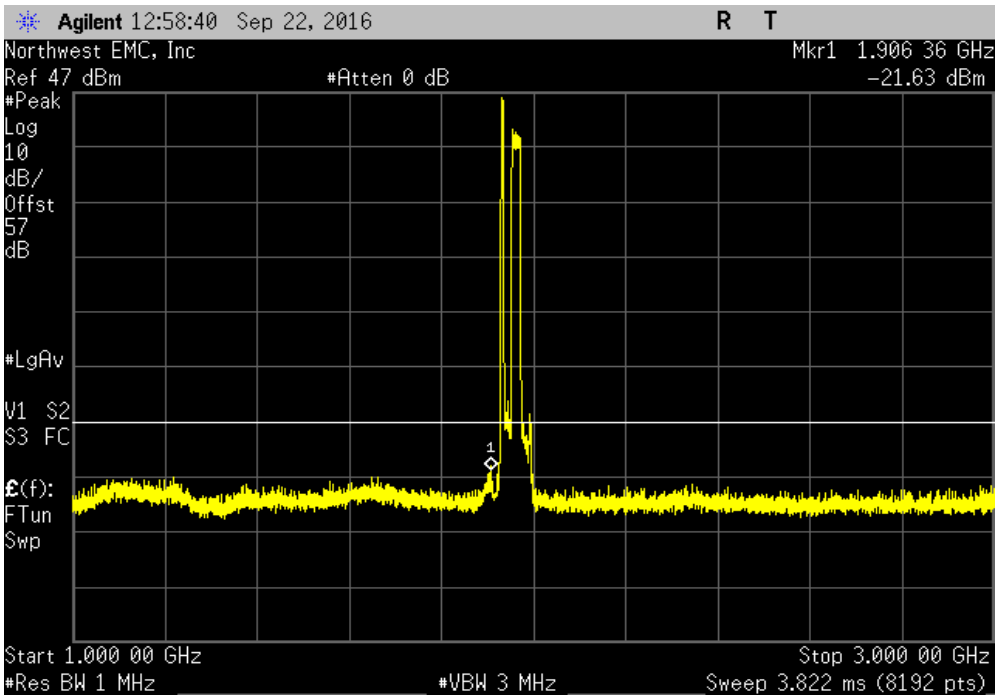
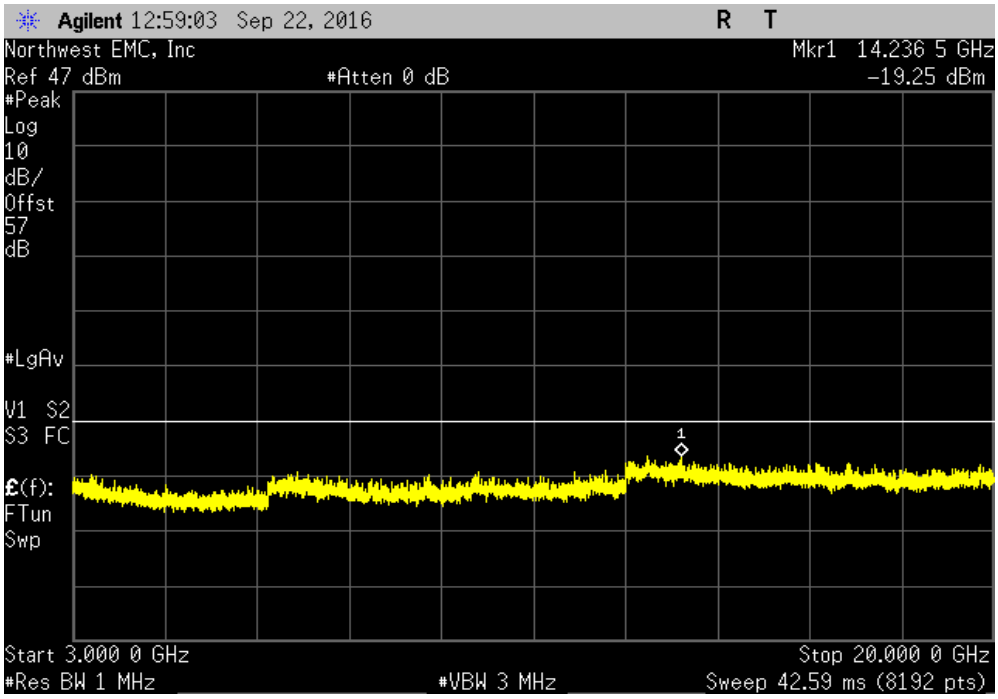
Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-21.63	-13	Pass



Antenna Port 2, Low Band Edge, WCDMA 1932.4 MHz & LTE20 1962.4 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.25	-13	Pass



INTERMODULATION - WCDMA

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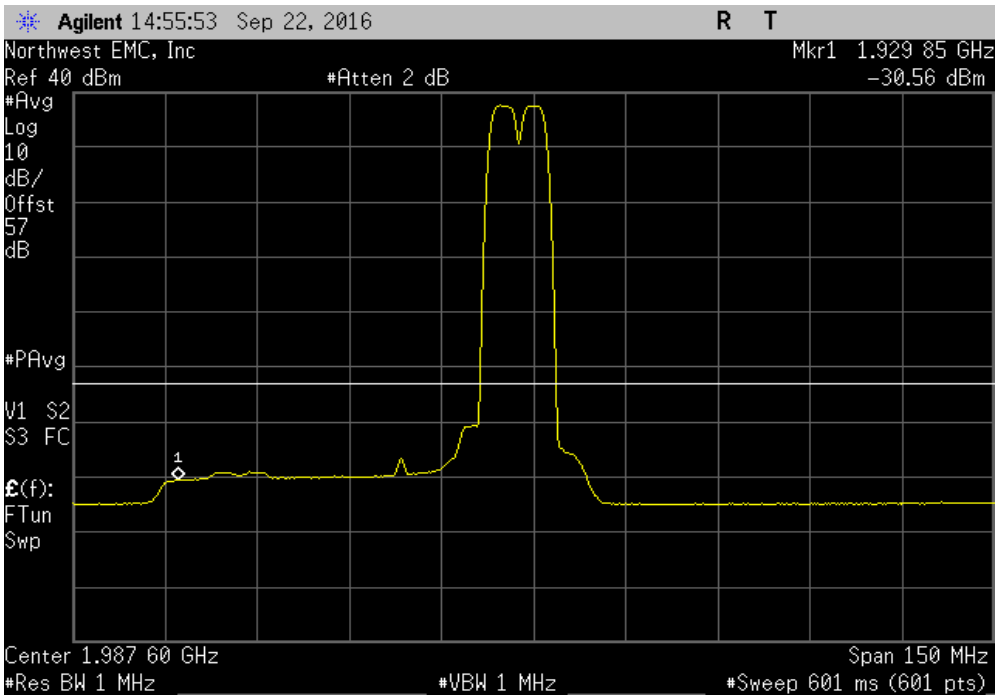
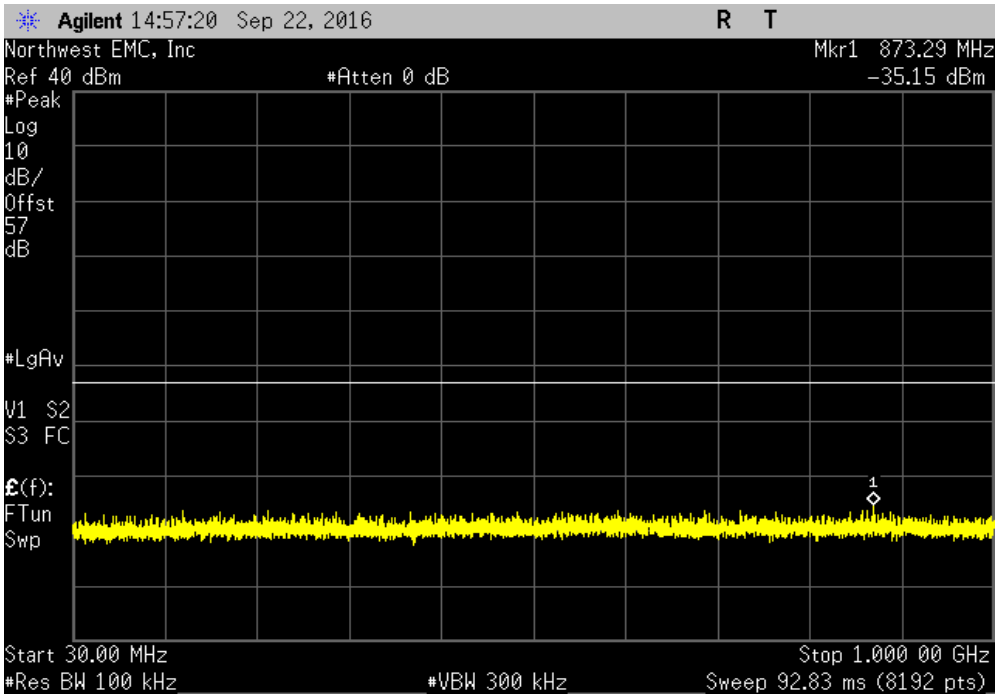
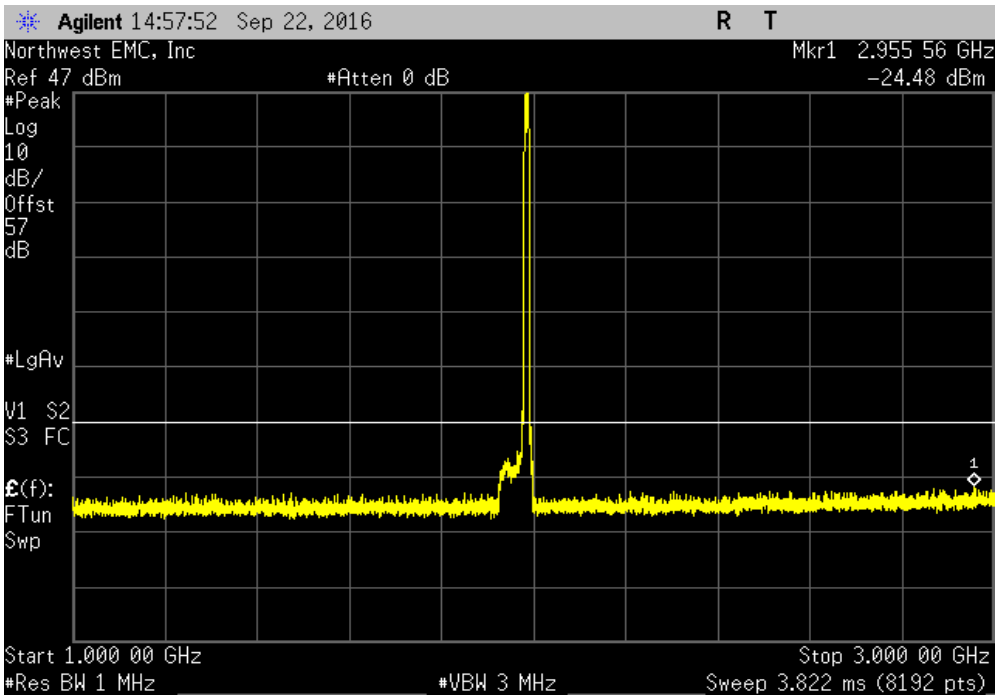
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



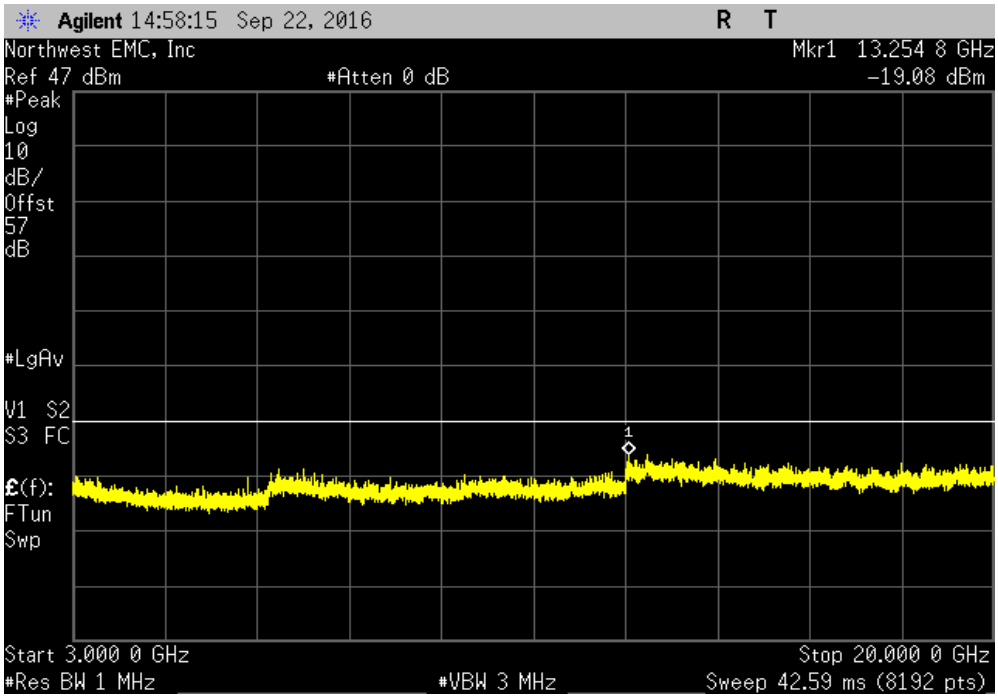
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-35.15	-13	Pass



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-24.48	-13	Pass



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1982.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.08	-13	Pass



INTERMODULATION - WCDMA

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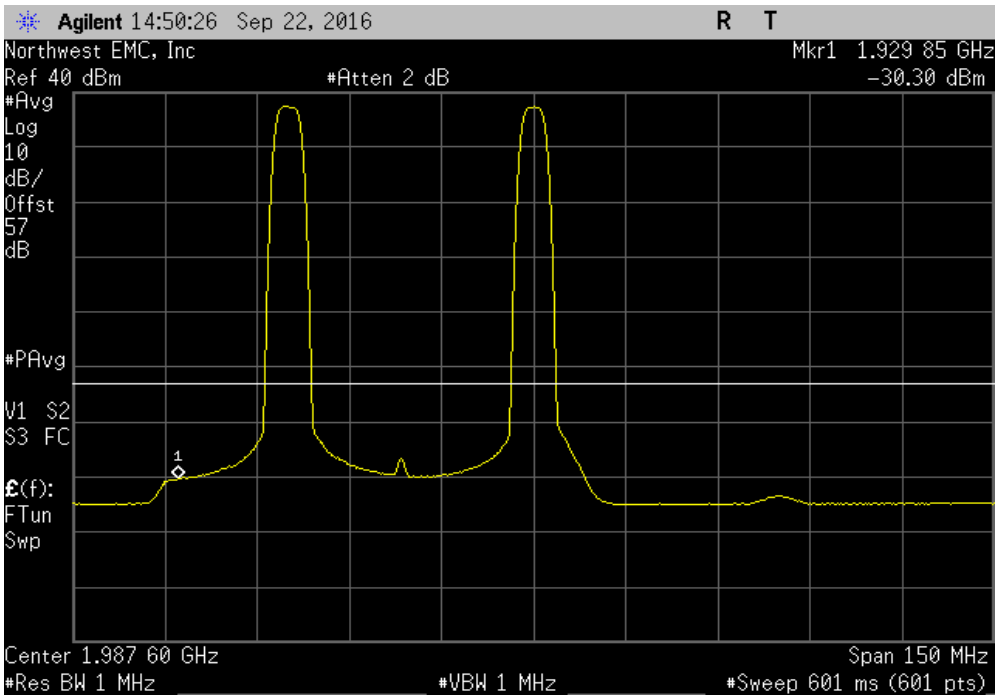
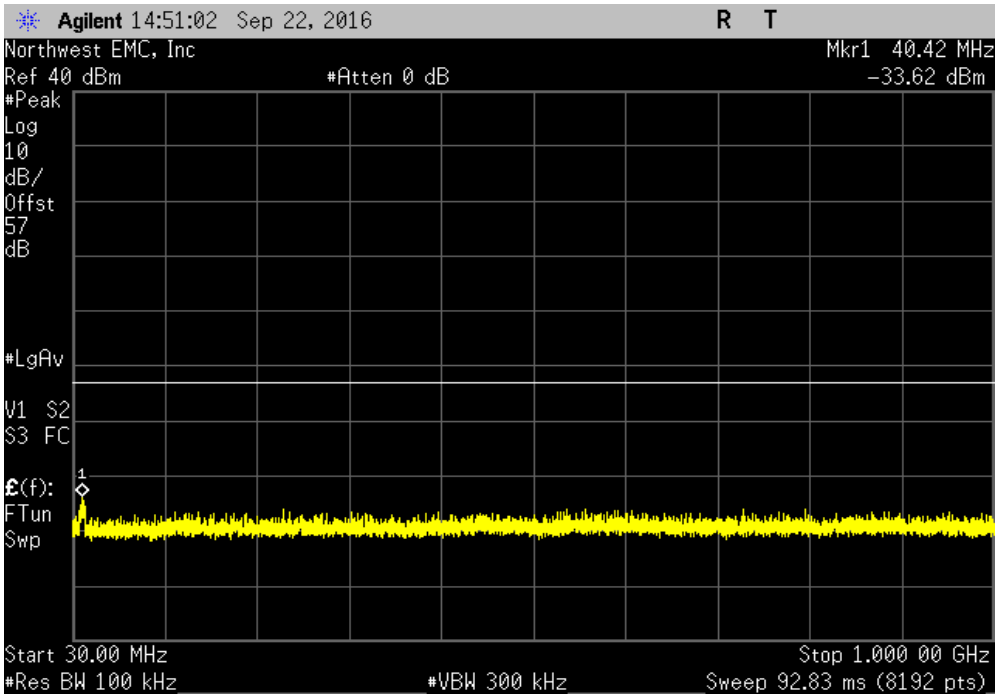
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.62	-13	Pass



INTERMODULATION - WCDMA

NORTHWEST EMC

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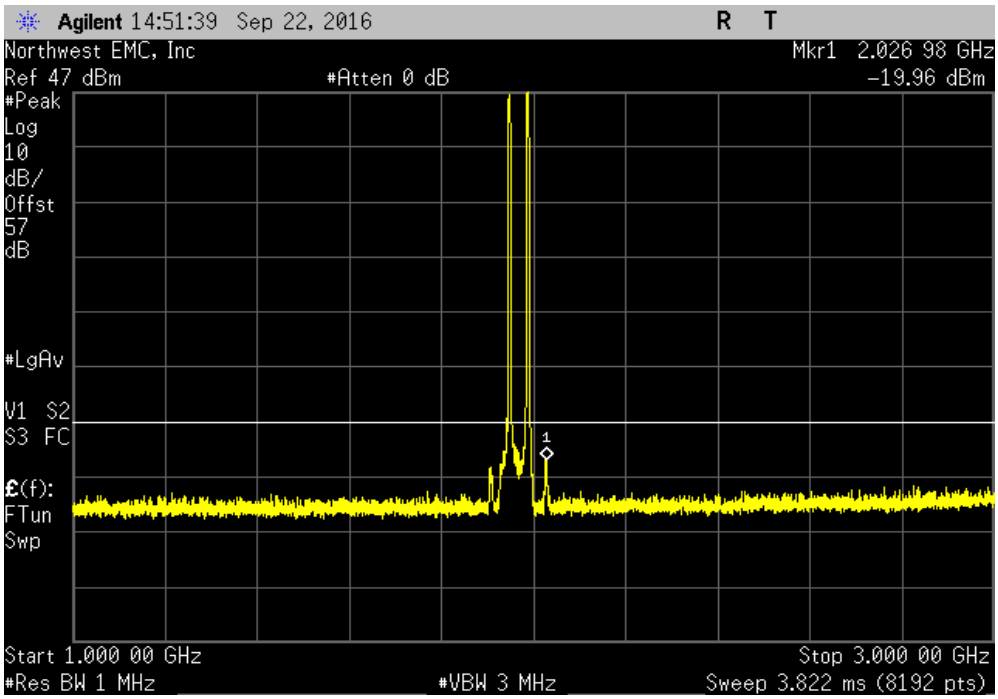
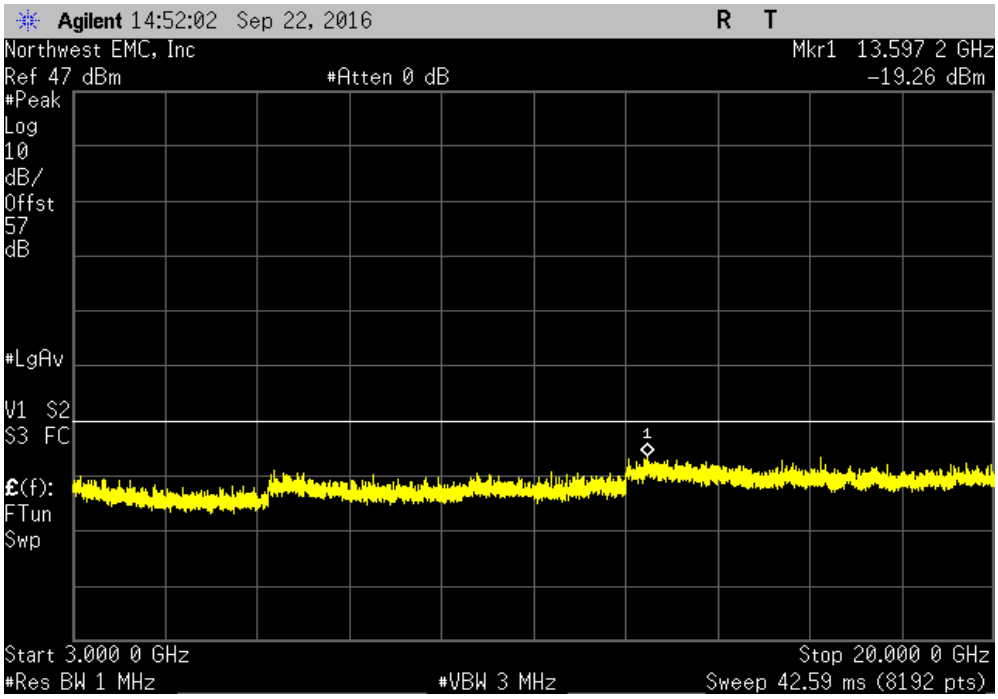
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.96	-13	Pass



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & WCDMA 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.26	-13	Pass



INTERMODULATION - WCDMA

NORTHWEST EMC

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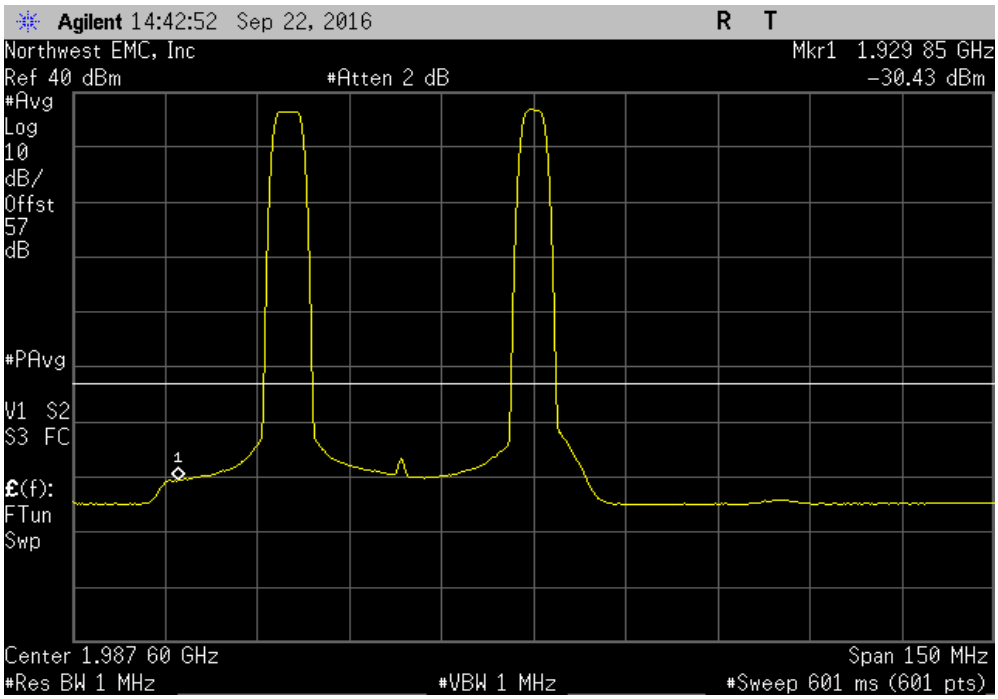
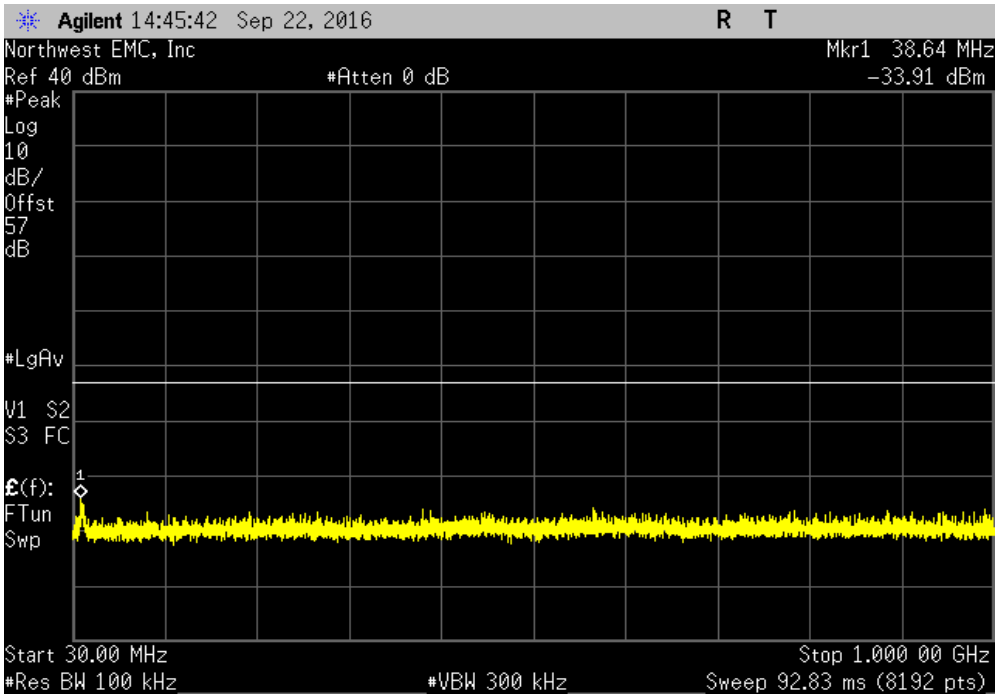
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-33.91	-13	Pass



INTERMODULATION - WCDMA

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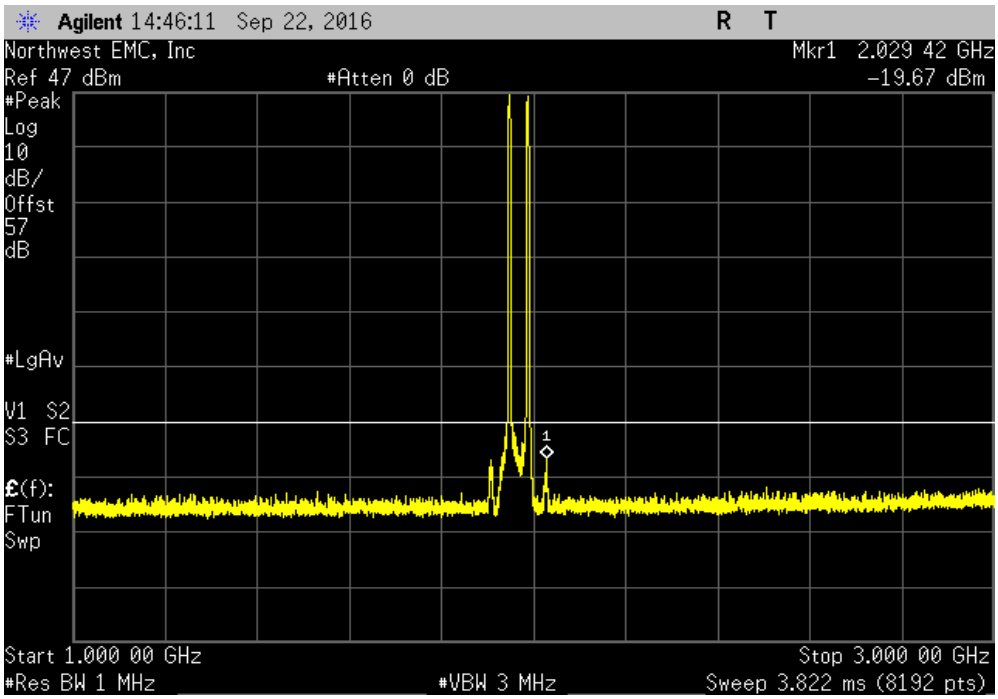
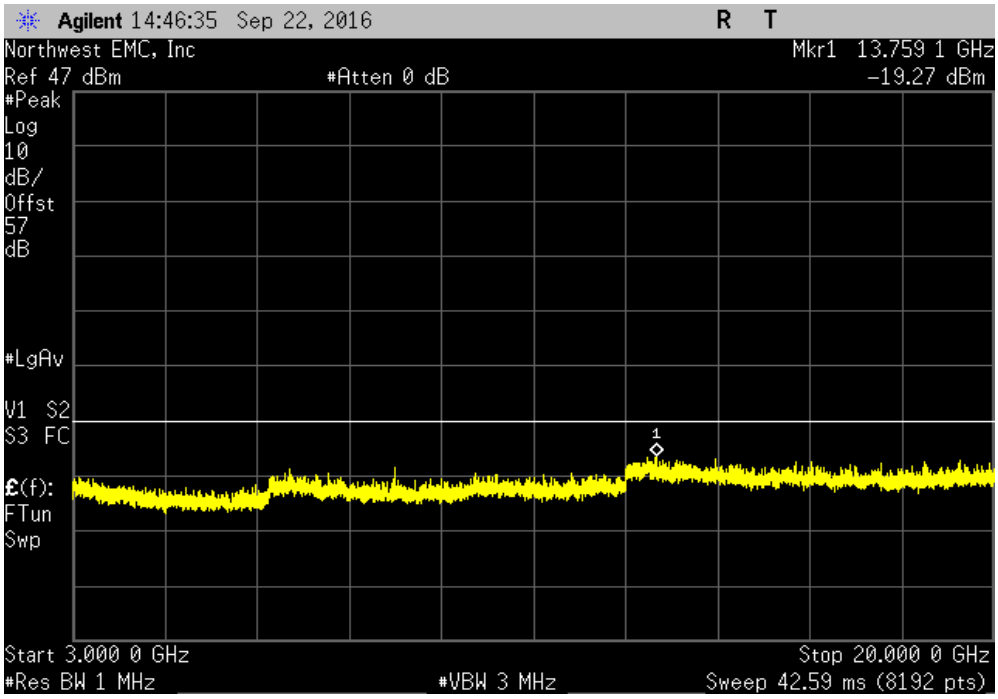
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-19.67	-13	Pass



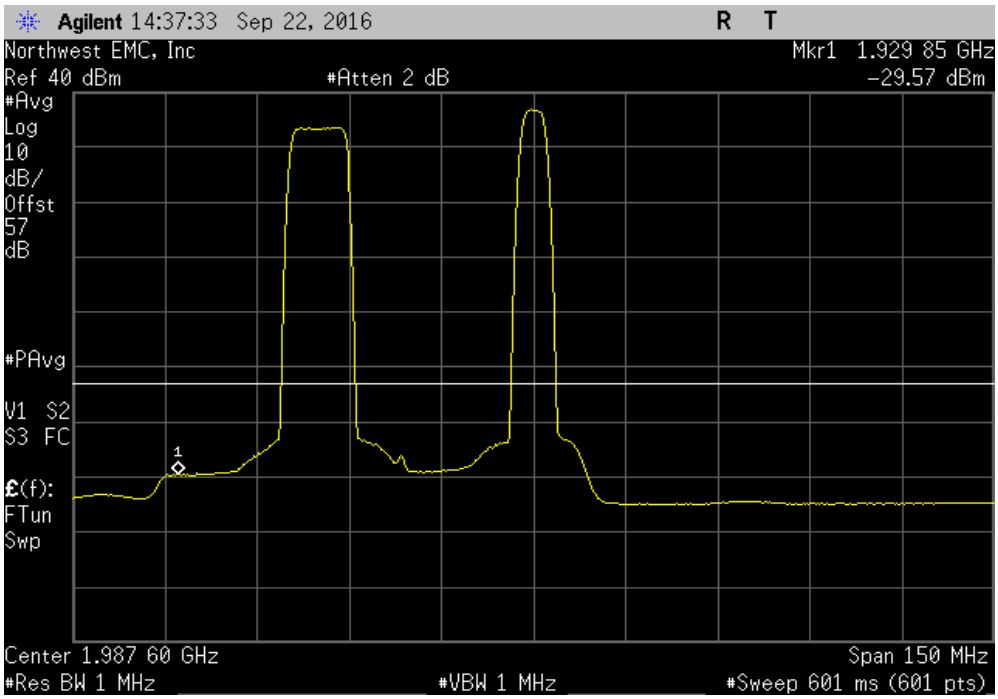
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE5 1947.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.27	-13	Pass



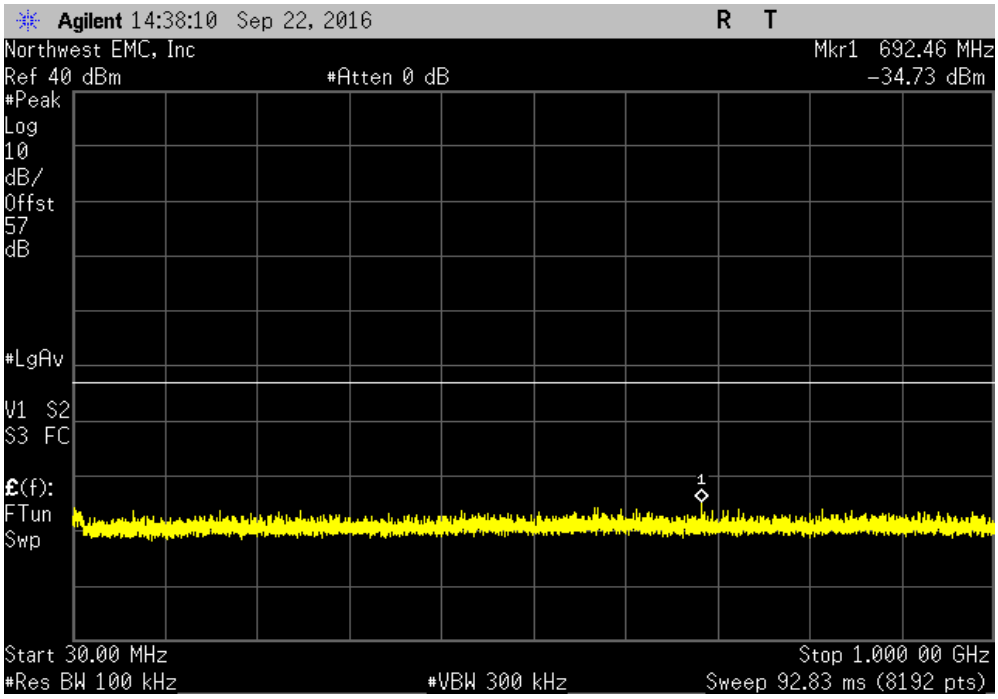
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.73	-13	Pass



INTERMODULATION - WCDMA

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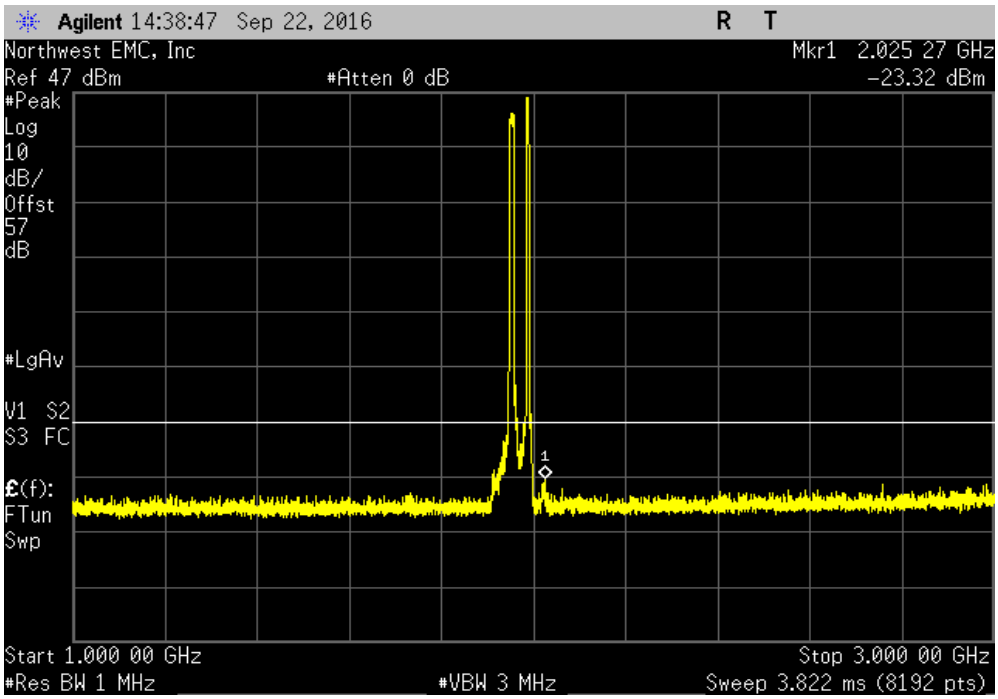
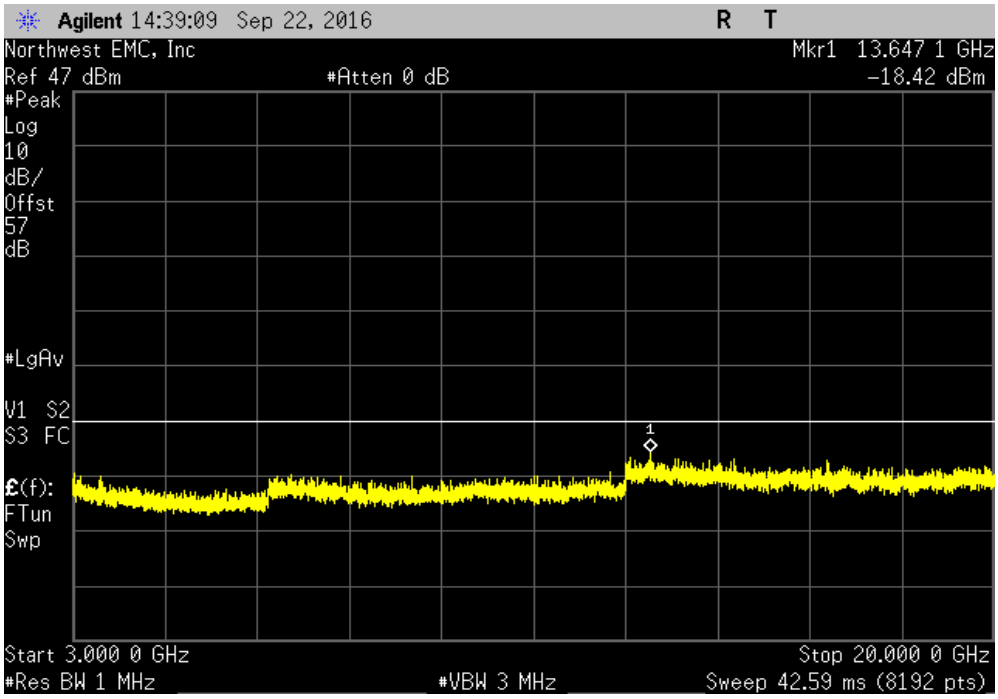
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-23.32	-13	Pass



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE10 1952.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-18.42	-13	Pass



INTERMODULATION - WCDMA

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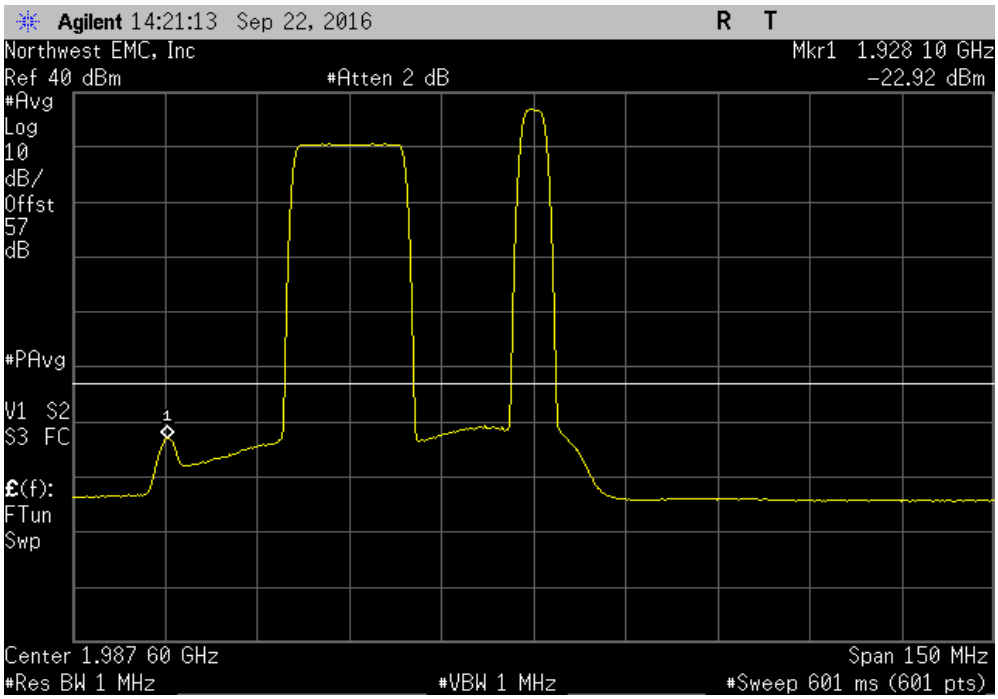
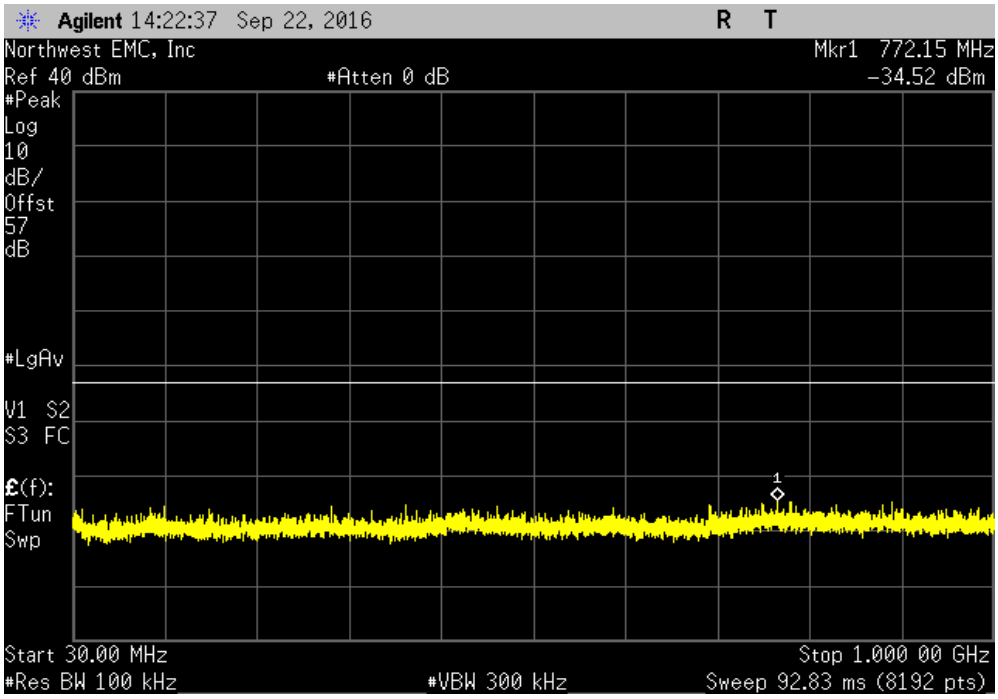
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	Fundamental			N/A	N/A	N/A



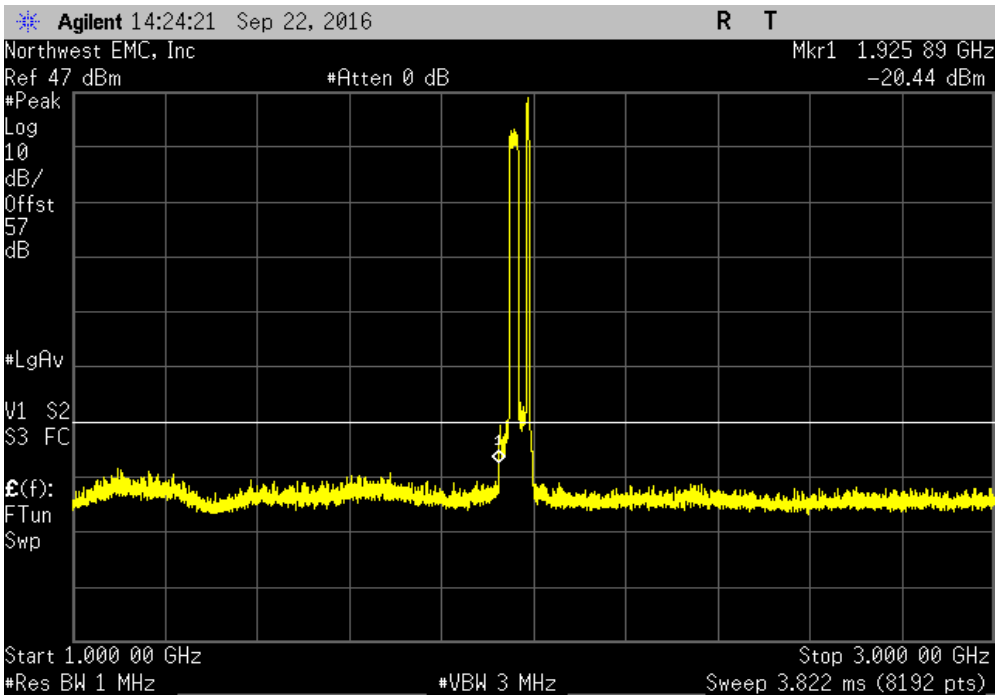
Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	30 MHz - 1 GHz			-34.52	-13	Pass



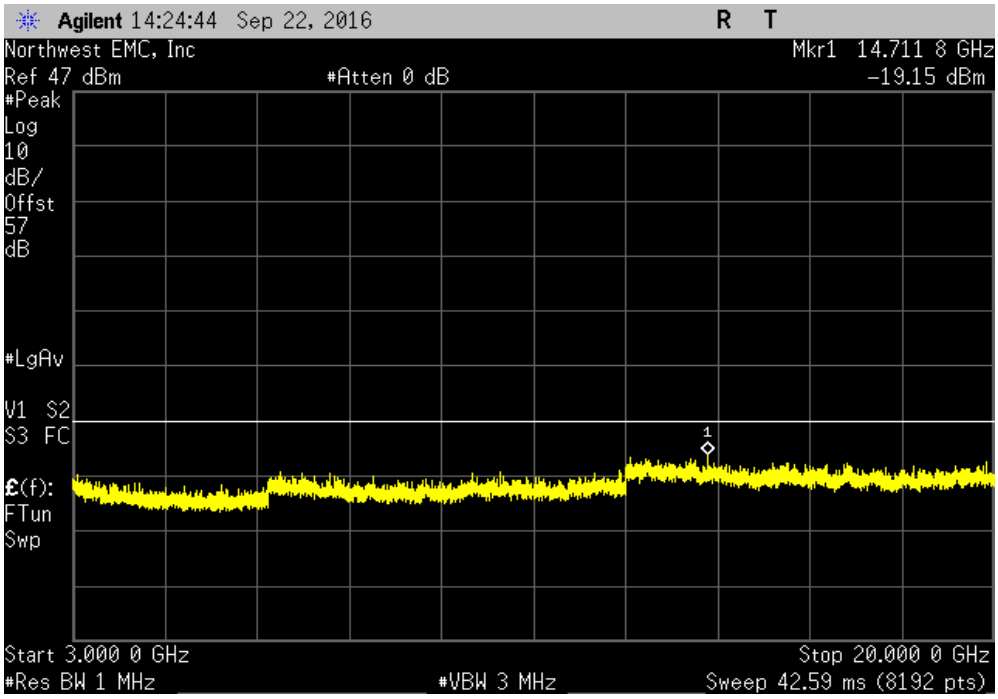
INTERMODULATION - WCDMA

XMit 2016.05.06

Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	1 GHz - 3 GHz			-20.44	-13	Pass



Antenna Port 2, High Band Edge, WCDMA 1987.6 MHz & LTE20 1957.6 MHz						
	Frequency Range			Max Value (dBm)	Limit ≤ (dBm)	Result
	3 GHz - 20 GHz			-19.15	-13	Pass



FREQUENCY STABILITY - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

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.	Cal. Due
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPHS-32-3.5-SCT/AC	TBE	NCR	NCR
Thermometer	Omega Engineering, Inc.	HH311	DUC	10/3/2014	10/3/2017
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spectrum analyzer is configured with a precision frequency reference that exceeds the stability requirement of the transmitter. The EUT was placed inside a temperature / humidity chamber.

Variation of Supply Voltage
The primary supply voltage was varied from 85% to 115% of the nominal voltage. A DC lab supply was used to vary the supply voltage.

Variation of Ambient Temperature
Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range.

FREQUENCY STABILITY - LTE BAND 2

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0073
Serial Number:	K163000003			**Date:**	08/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	22.4 °C
Attendees:	Andy Ku			**Humidity:**	50% RH
Project:	None			**Barometric Pres.:**	1015 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	**Test Method**
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

None

Configuration #	1	*Signature*

		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
Port 1						
	Normal Temperature and Voltage					
	Low Channel LTE5, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Voltage, 55.2 VDC					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
	Extreme Voltage, 40.8 VAC					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -30°C					
	Low Channel LTE5, 1932.5 MHz	1932.500242	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -20°C					
	Low Channel LTE5, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.50018	1987.5	0.1	1	Pass
	Extreme Temperature, -10°C					
	Low Channel LTE5, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, 0°C					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
	Extreme Temperature, +10°C					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000169	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, +20°C					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, +30°C					
	Low Channel LTE5, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.499914	1987.5	0	1	Pass
	Extreme Temperature, +40°C					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.001519	1960	0.8	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500093	1987.5	0.1	1	Pass
	Extreme Temperature, +50°C					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Port 2						
	Normal Temperature and Voltage					
	Low Channel LTE5, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Voltage, 55.2 VDC					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
	Extreme Voltage, 40.8 VAC					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -30°C					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500493	1987.5	0.3	1	Pass
	Extreme Temperature, -20°C					
	Low Channel LTE5, 1932.5 MHz	1932.500808	1932.5	0.4	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000153	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -10°C					
	Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass

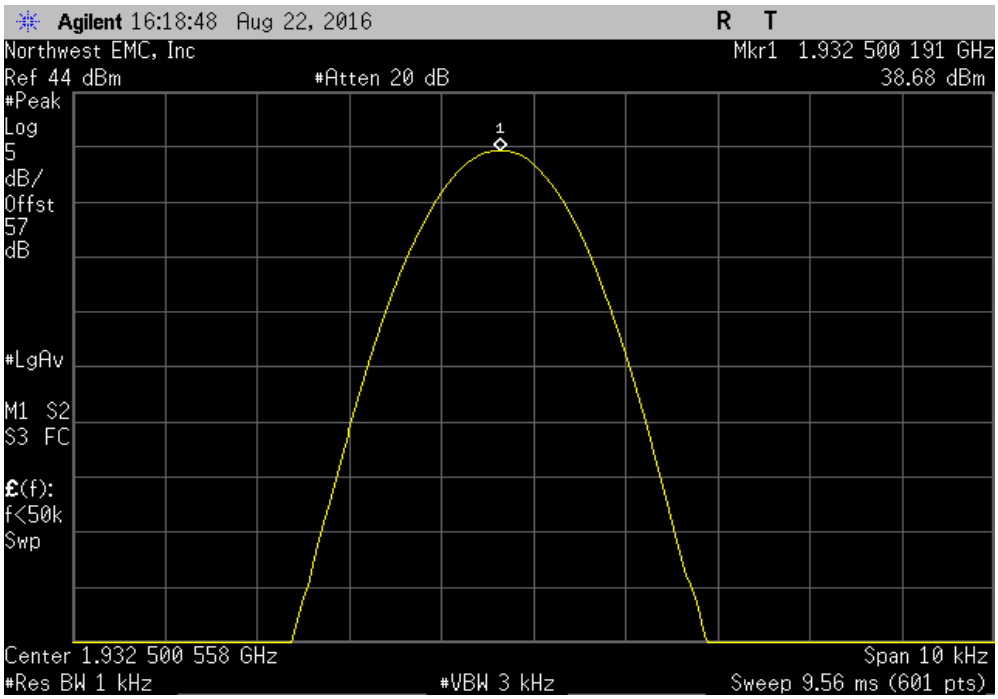
Extreme Temperature, 0°C					
Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
Mid Channel LTE5, 1960 MHz	1960.000171	1960	0.1	1	Pass
High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Extreme Temperature, +10°C					
Low Channel LTE5, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel LTE5, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
Extreme Temperature, +20°C					
Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Extreme Temperature, +30°C					
Low Channel LTE5, 1932.5 MHz	1932.500171	1932.5	0.1	1	Pass
Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel LTE5, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
Extreme Temperature, +40°C					
Low Channel LTE5, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
Mid Channel LTE5, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Extreme Temperature, +50°C					
Low Channel LTE5, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
Mid Channel LTE5, 1960 MHz	1960.000169	1960	0.1	1	Pass
High Channel LTE5, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass

FREQUENCY STABILITY - LTE BAND 2

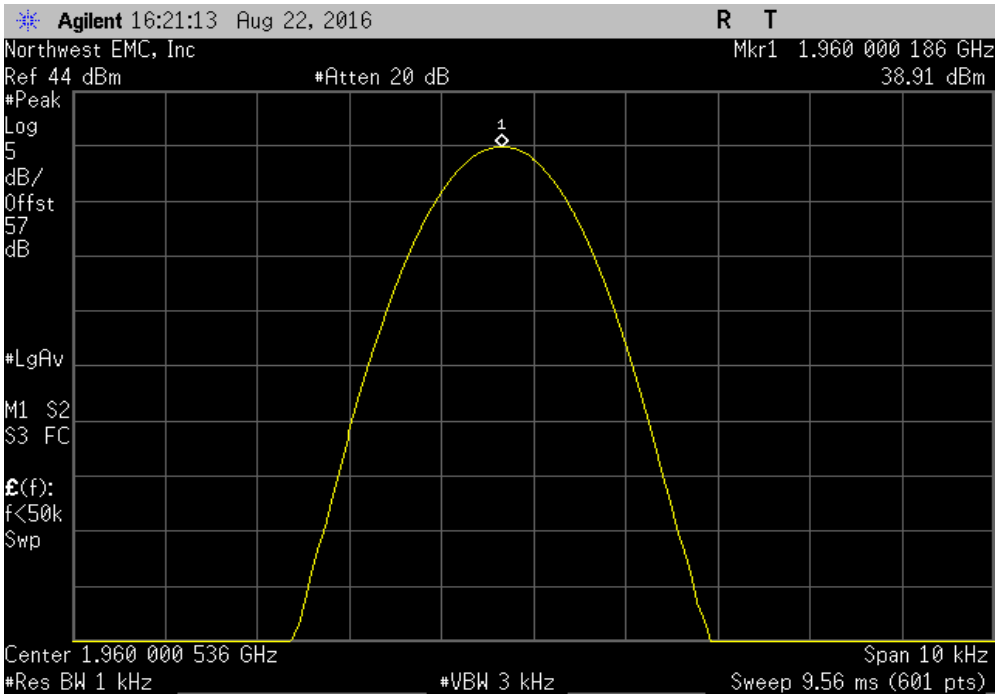
NORTHWEST EMC

XMit 2016.05.06

Port 1, Normal Temperature and Voltage, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



Port 1, Normal Temperature and Voltage, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass

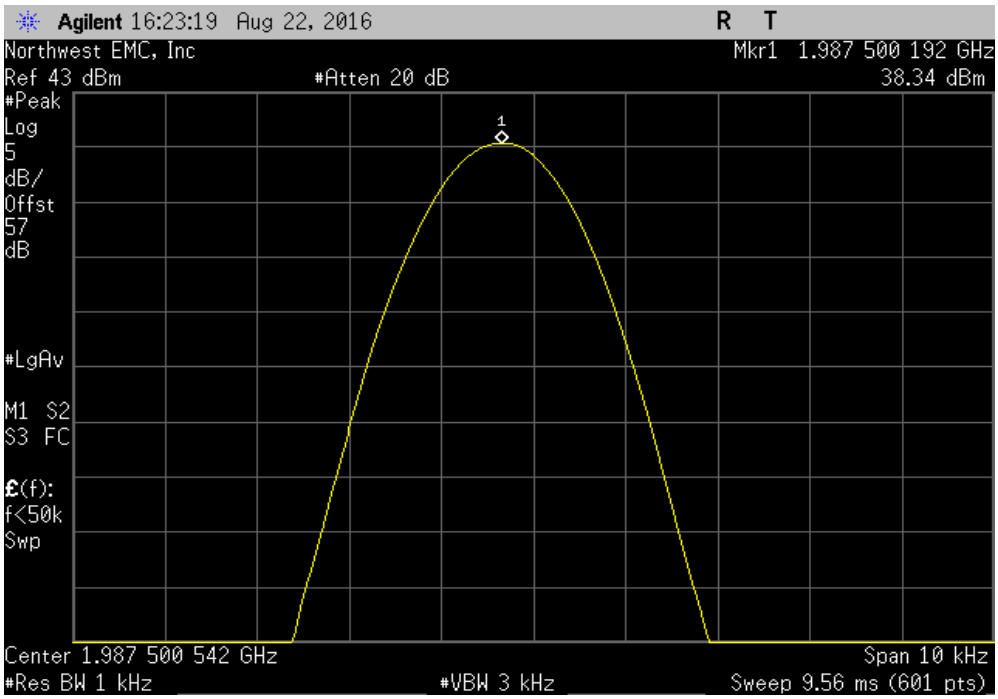


FREQUENCY STABILITY - LTE BAND 2

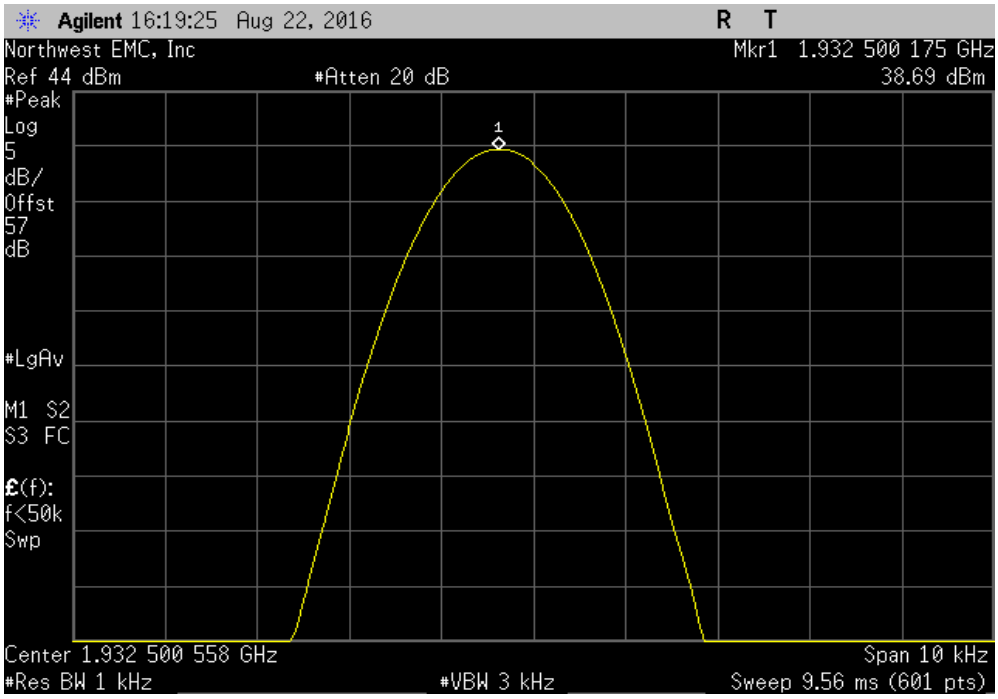
NORTHWEST EMC

XMit 2016.05.06

Port 1, Normal Temperature and Voltage, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 1, Extreme Voltage, 55.2 VDC, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass

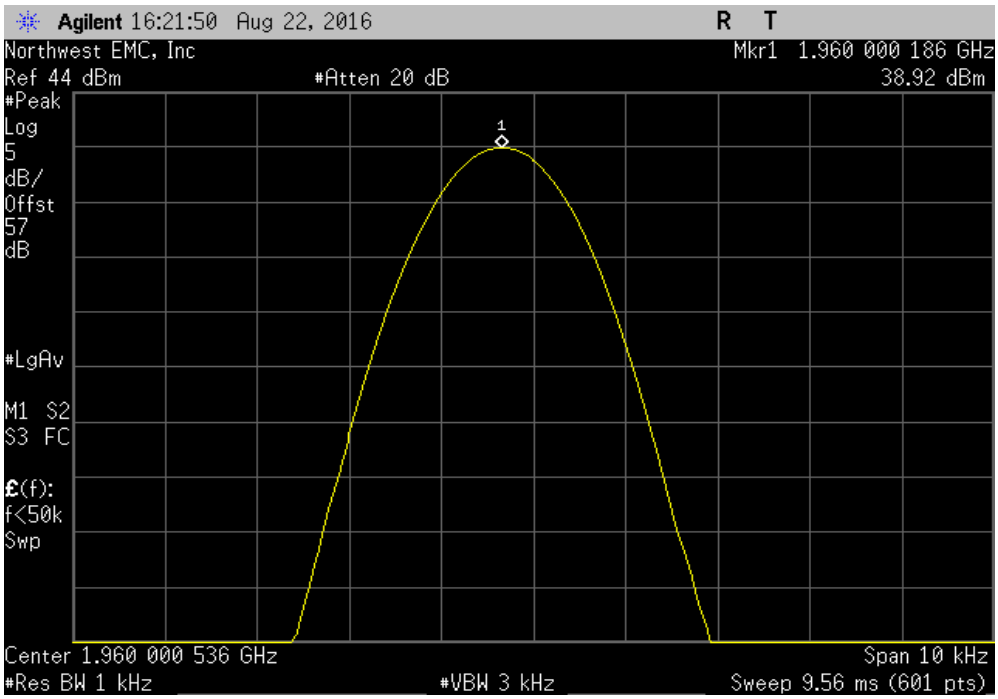


FREQUENCY STABILITY - LTE BAND 2

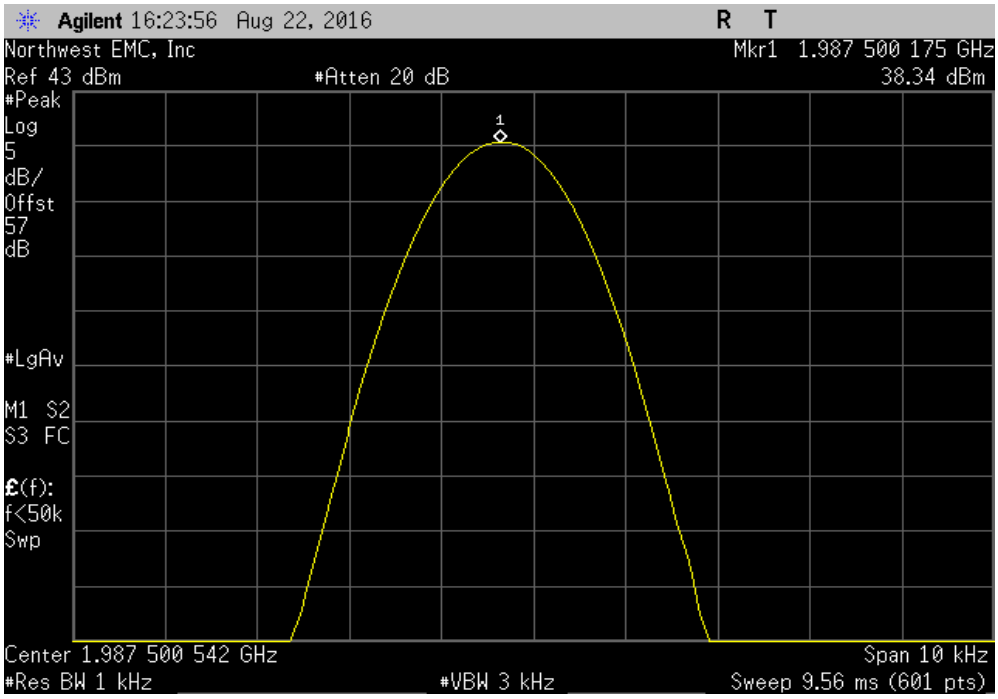
NORTHWEST EMC

XMit 2016.05.06

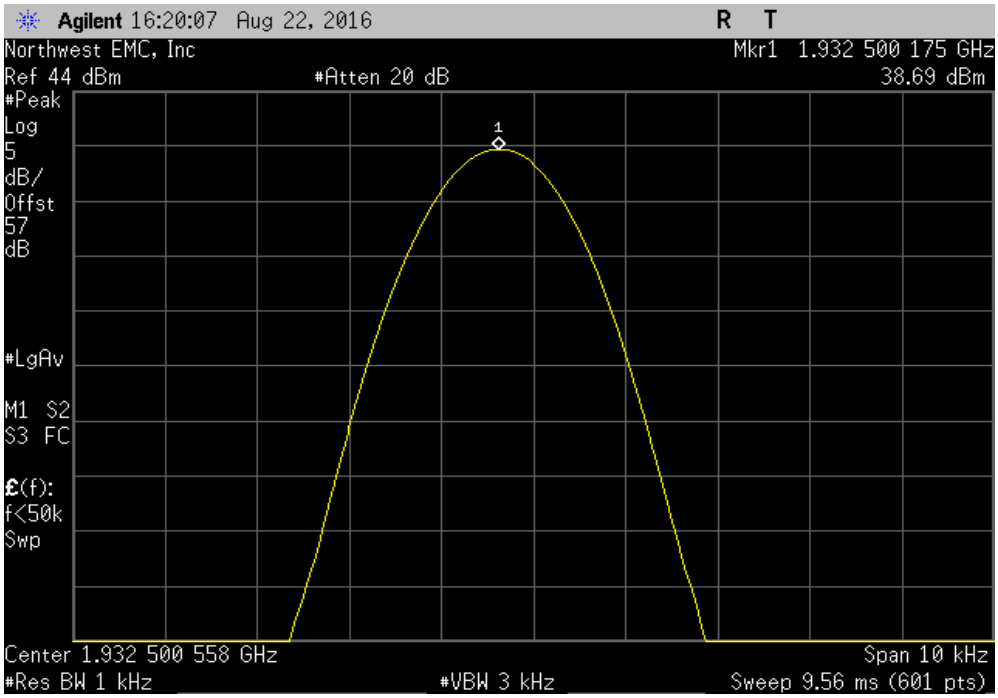
Port 1, Extreme Voltage, 55.2 VDC, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



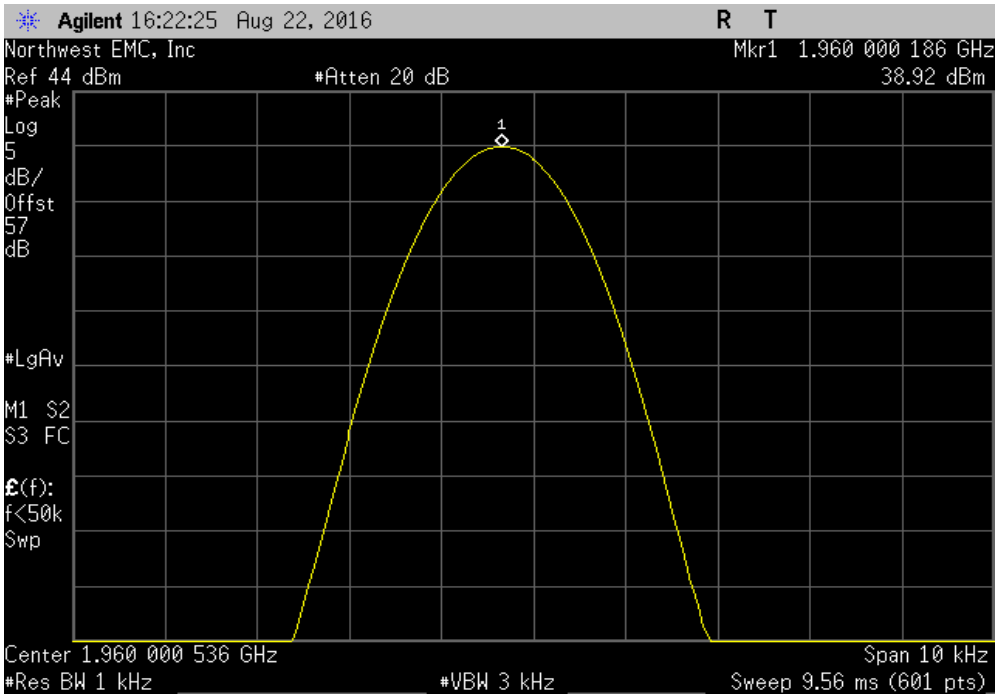
Port 1, Extreme Voltage, 55.2 VDC, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass



Port 1, Extreme Voltage, 40.8 VAC, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



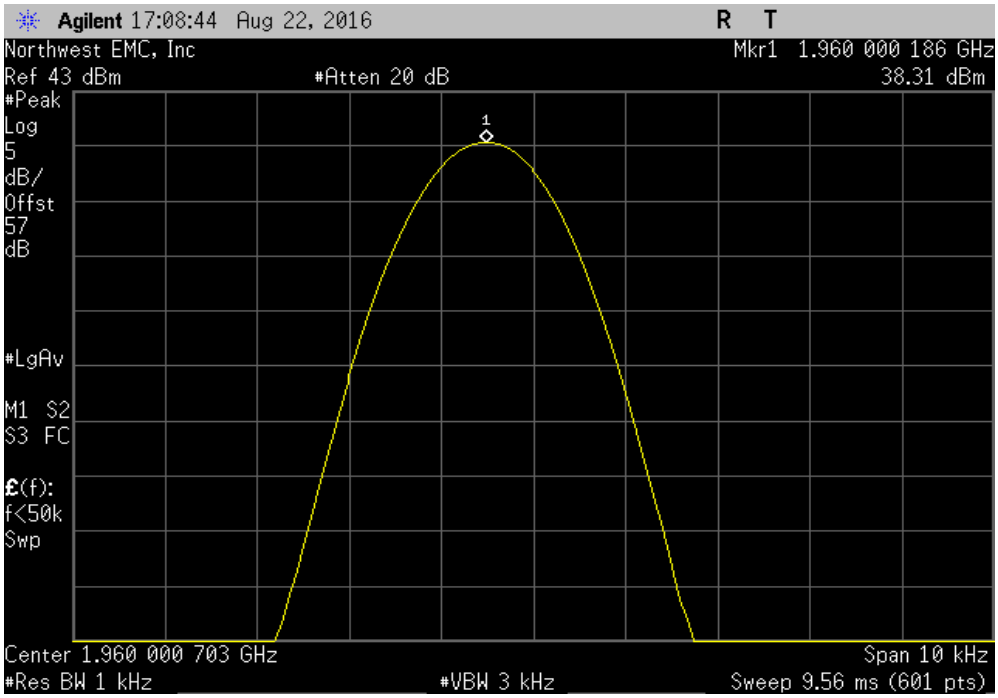
Port 1, Extreme Voltage, 40.8 VAC, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



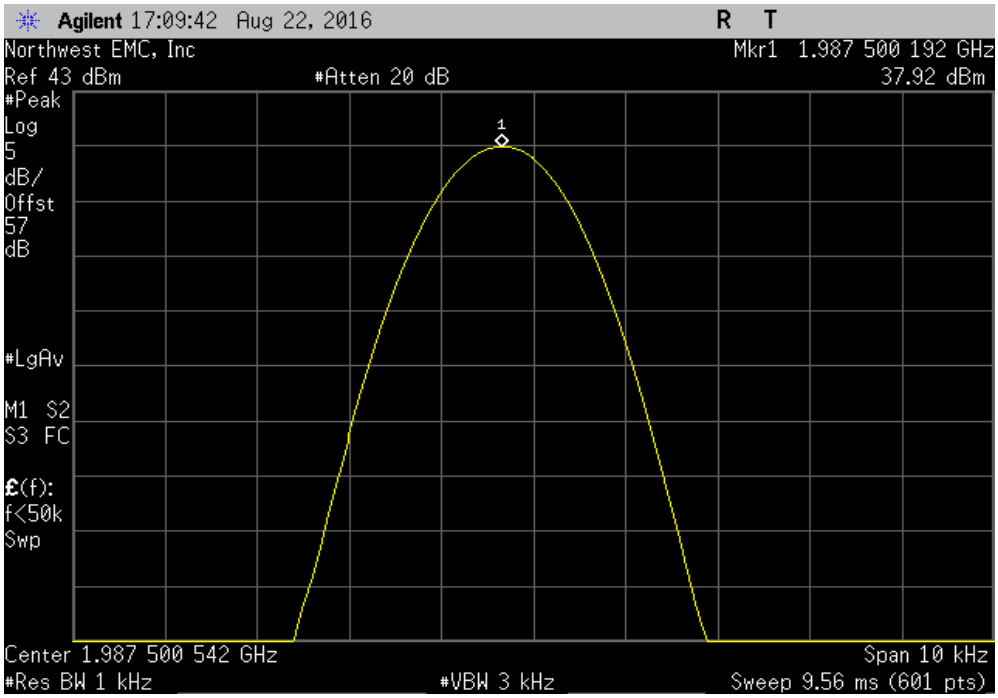
FREQUENCY STABILITY - LTE BAND 2

XMit 2016.05.06

Port 1, Extreme Temperature, -30°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 1, Extreme Temperature, -30°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass

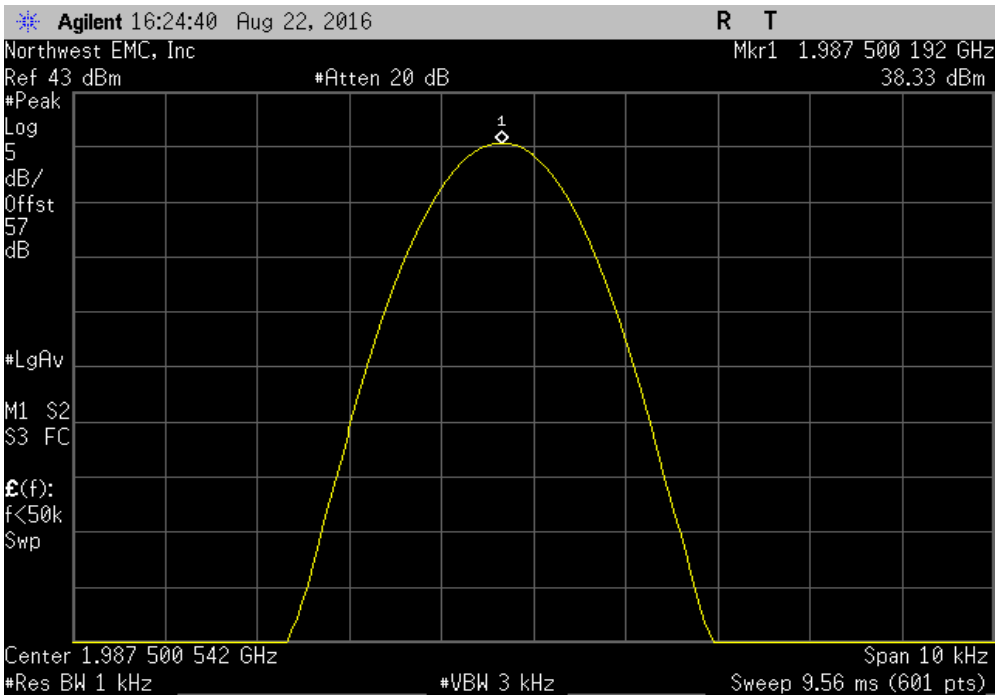


FREQUENCY STABILITY - LTE BAND 2

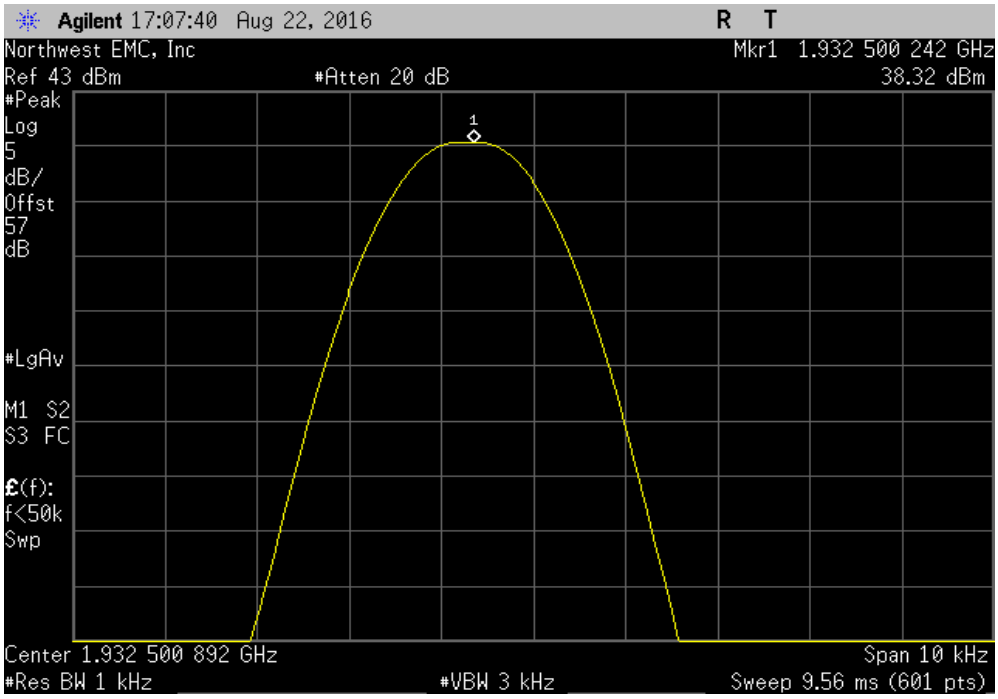
NORTHWEST EMC

XMit 2016.05.06

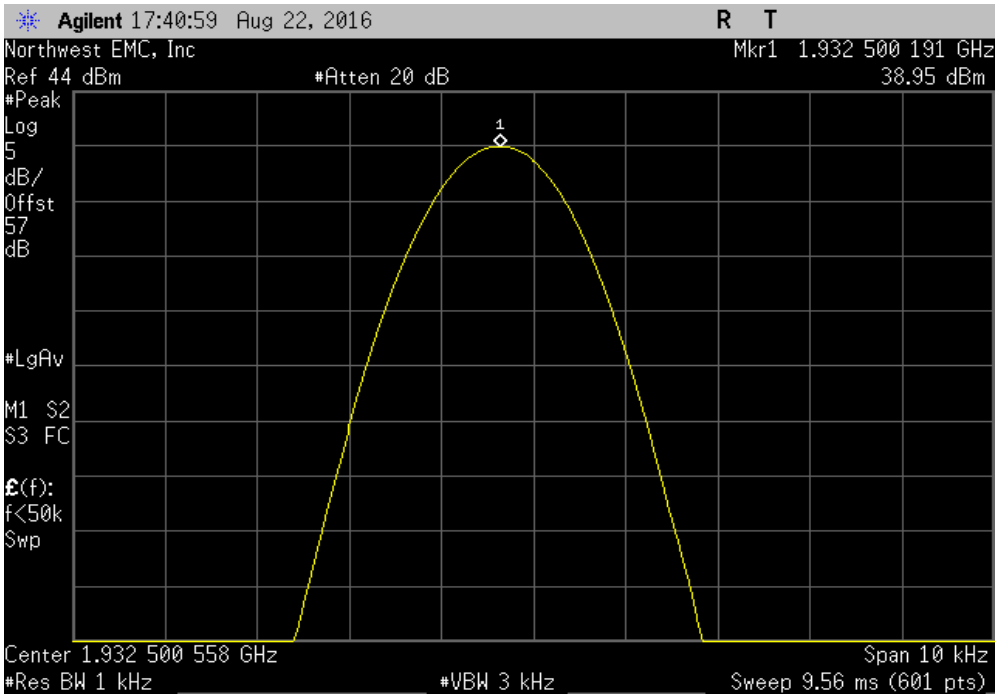
Port 1, Extreme Voltage, 40.8 VAC, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



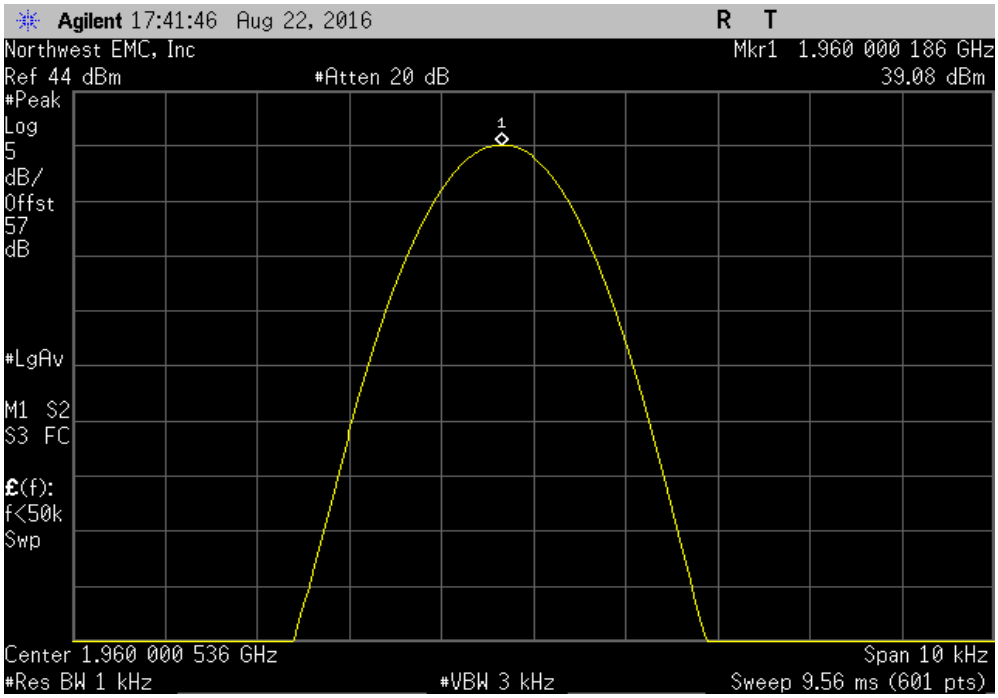
Port 1, Extreme Temperature, -30°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500242	1932.5	0.1	1	Pass



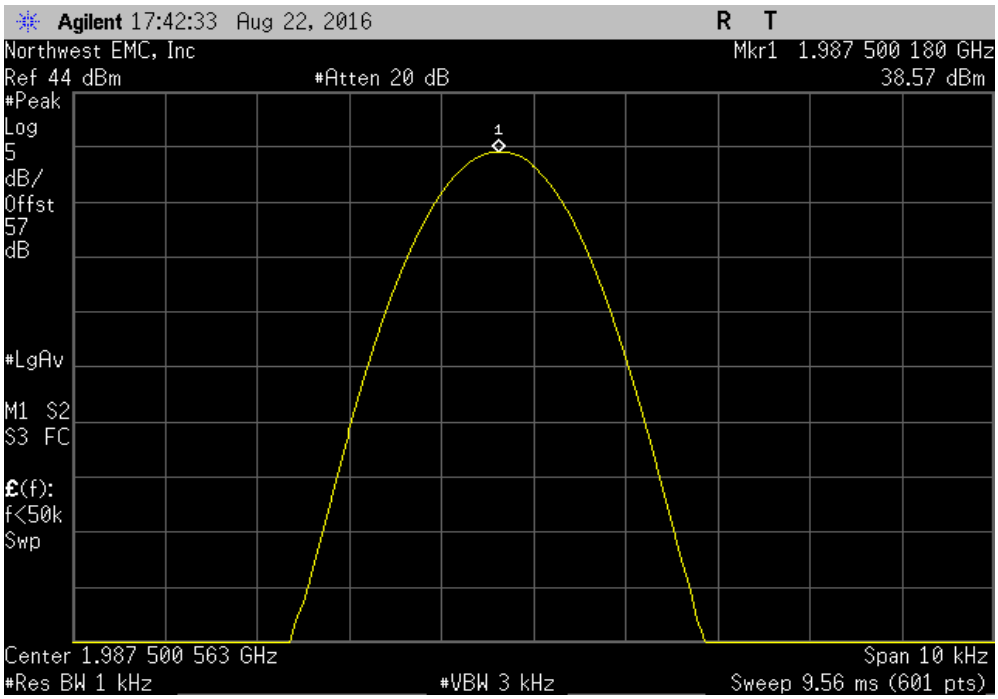
Port 1, Extreme Temperature, -20°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



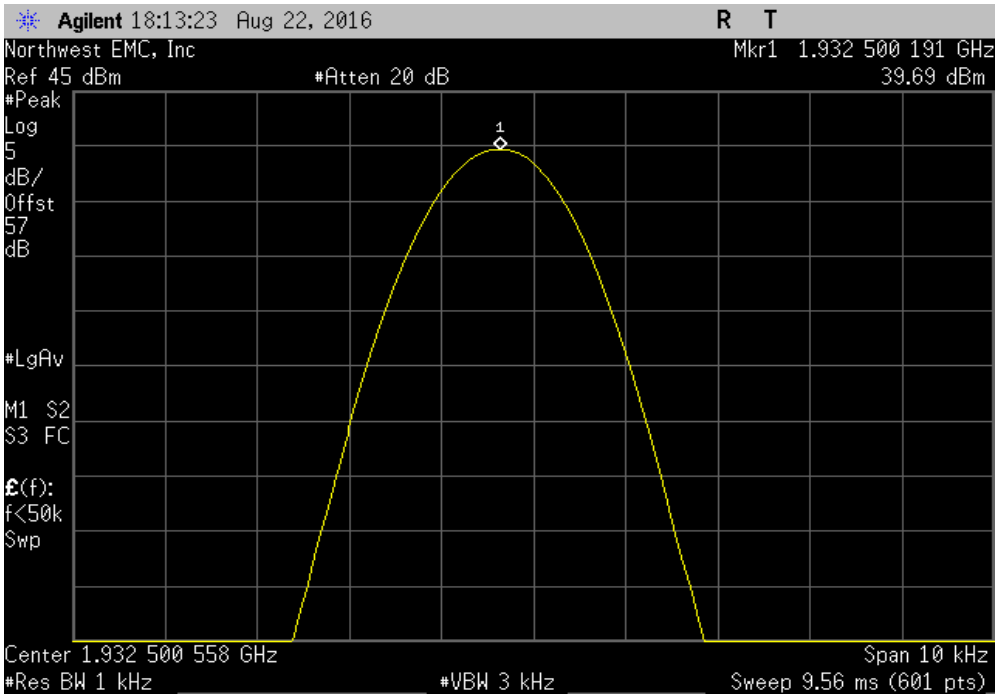
Port 1, Extreme Temperature, -20°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



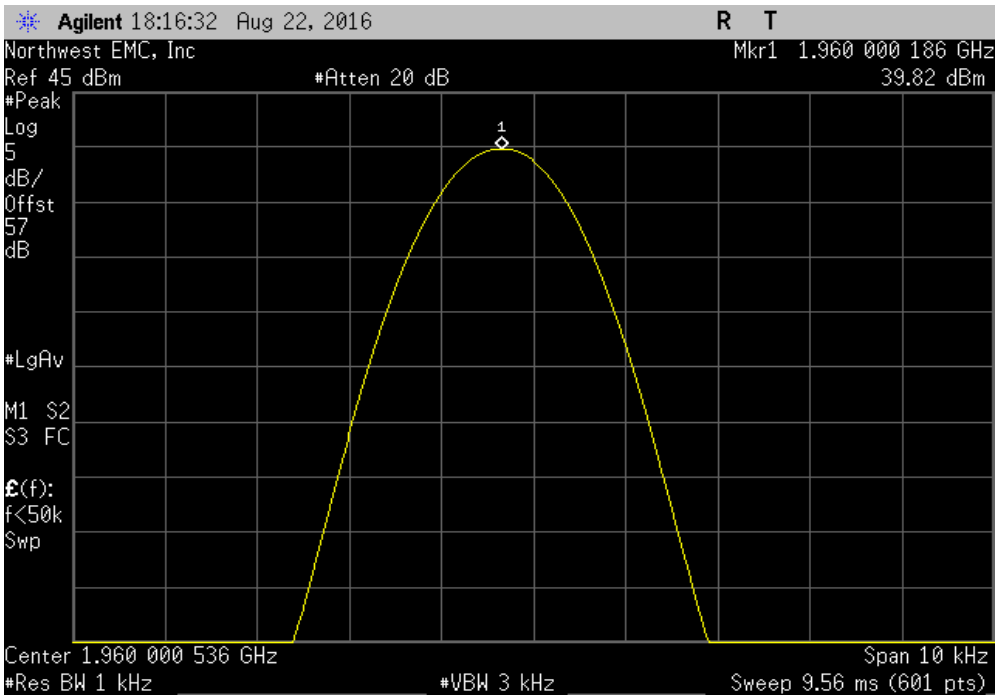
Port 1, Extreme Temperature, -20°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.50018	1987.5	0.1	1	Pass



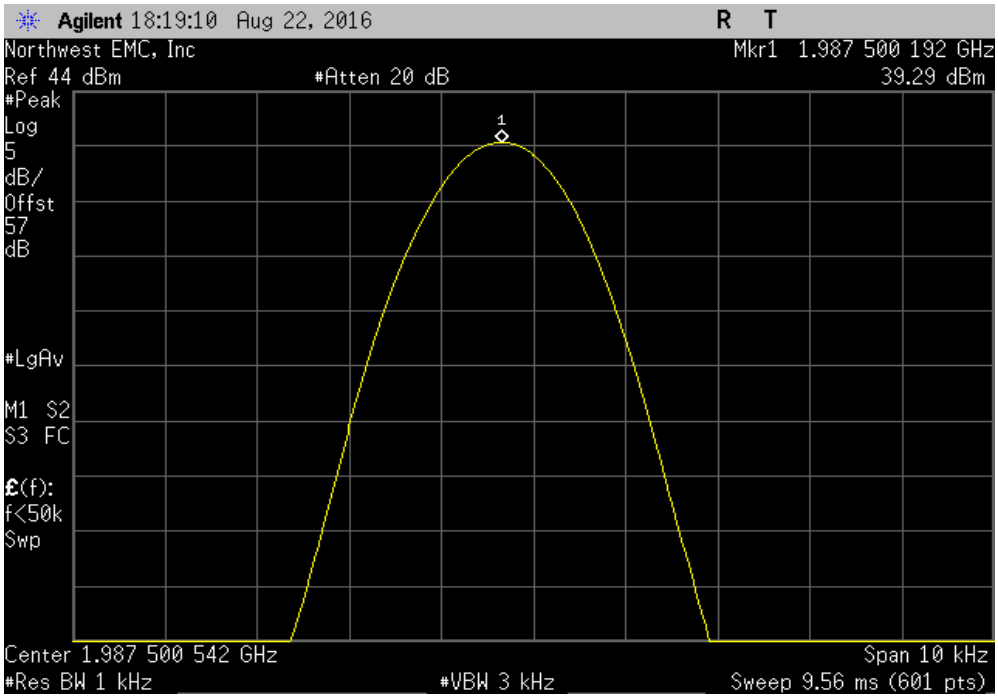
Port 1, Extreme Temperature, -10°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



Port 1, Extreme Temperature, -10°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



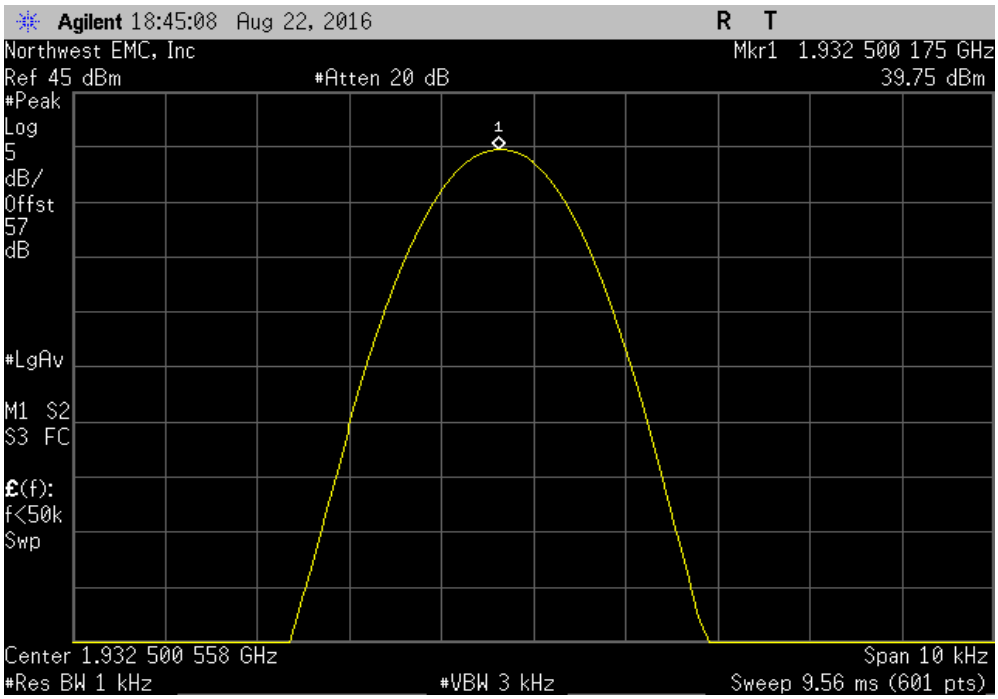
Port 1, Extreme Temperature, -10°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



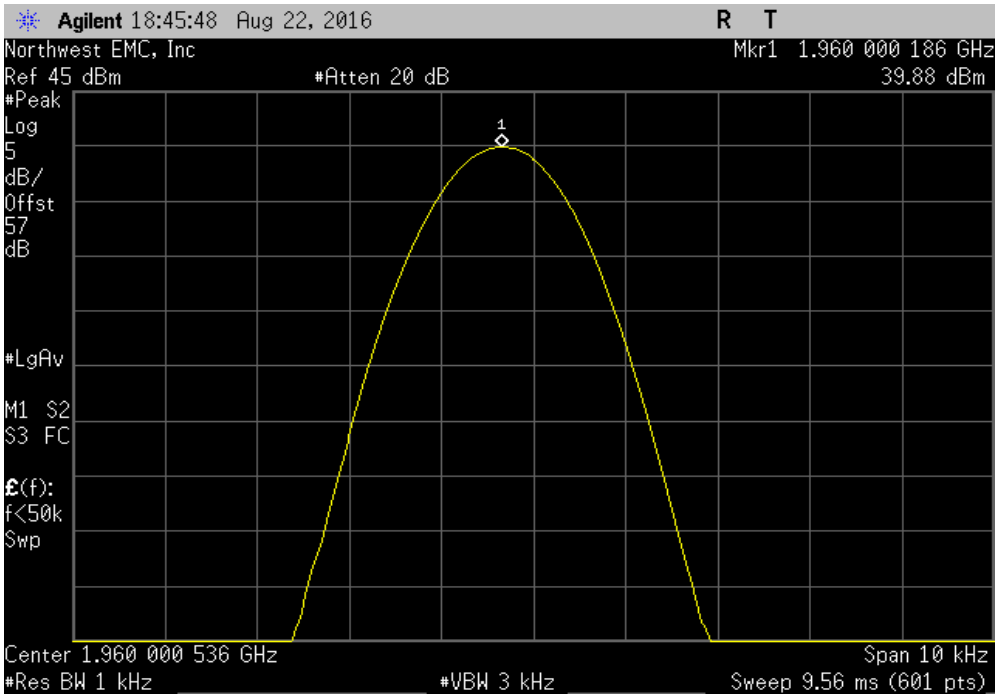
FREQUENCY STABILITY - LTE BAND 2

XMit 2016.05.06

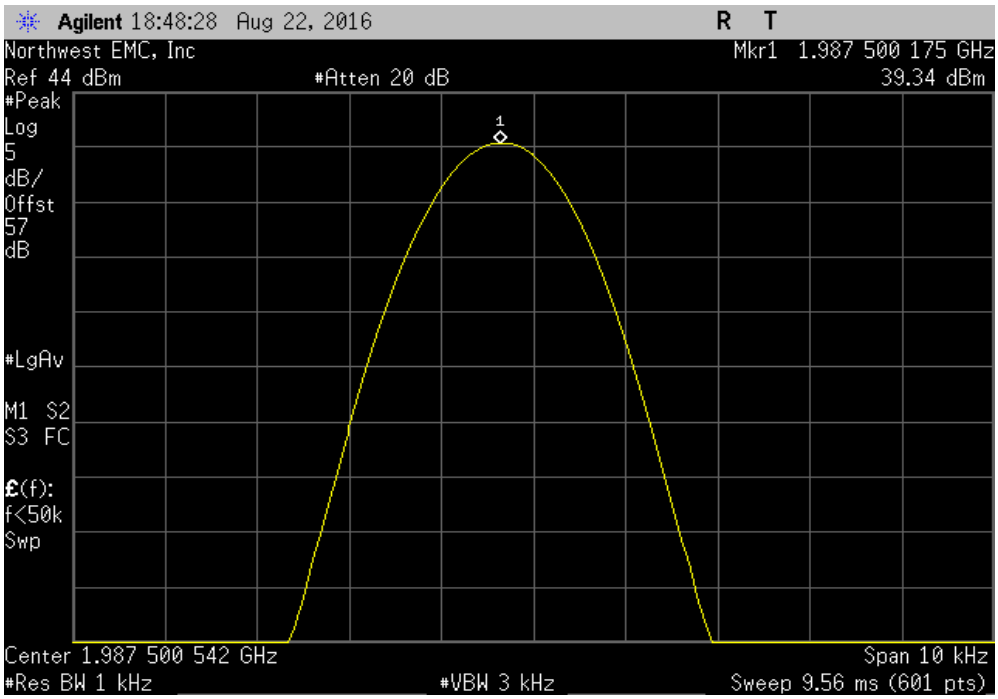
Port 1, Extreme Temperature, 0°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



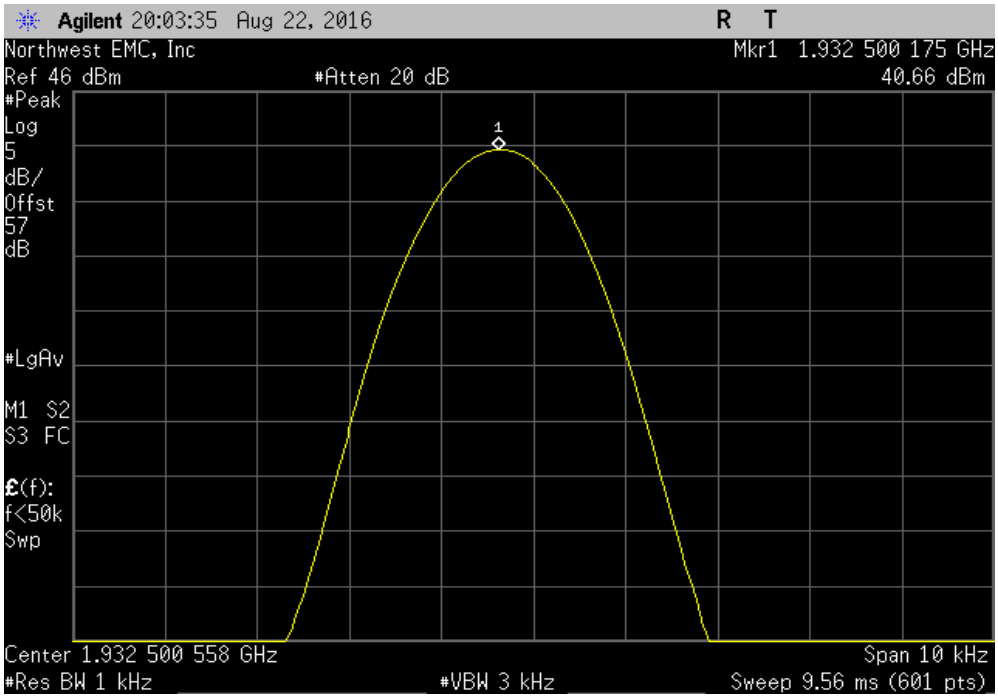
Port 1, Extreme Temperature, 0°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



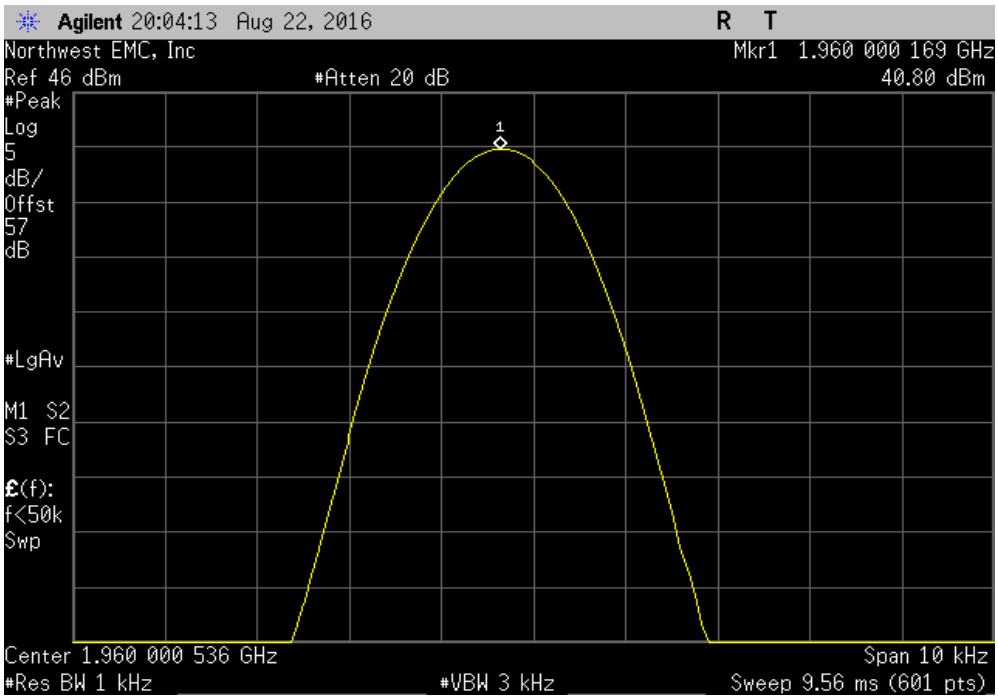
Port 1, Extreme Temperature, 0°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass



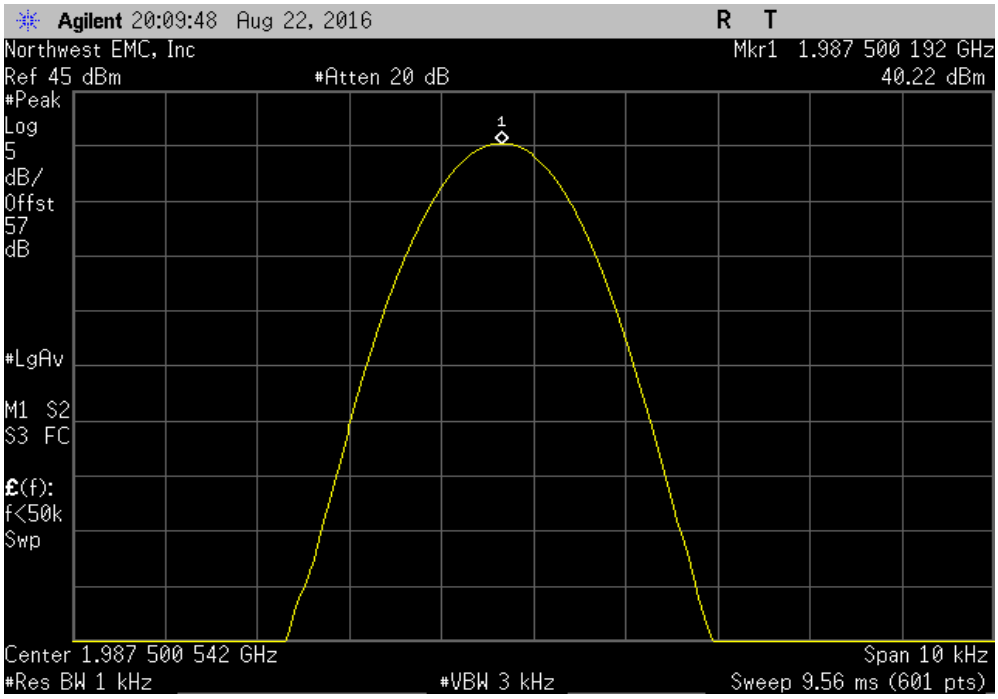
Port 1, Extreme Temperature, +10°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



Port 1, Extreme Temperature, +10°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000169	1960	0.1	1	Pass



Port 1, Extreme Temperature, +10°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass

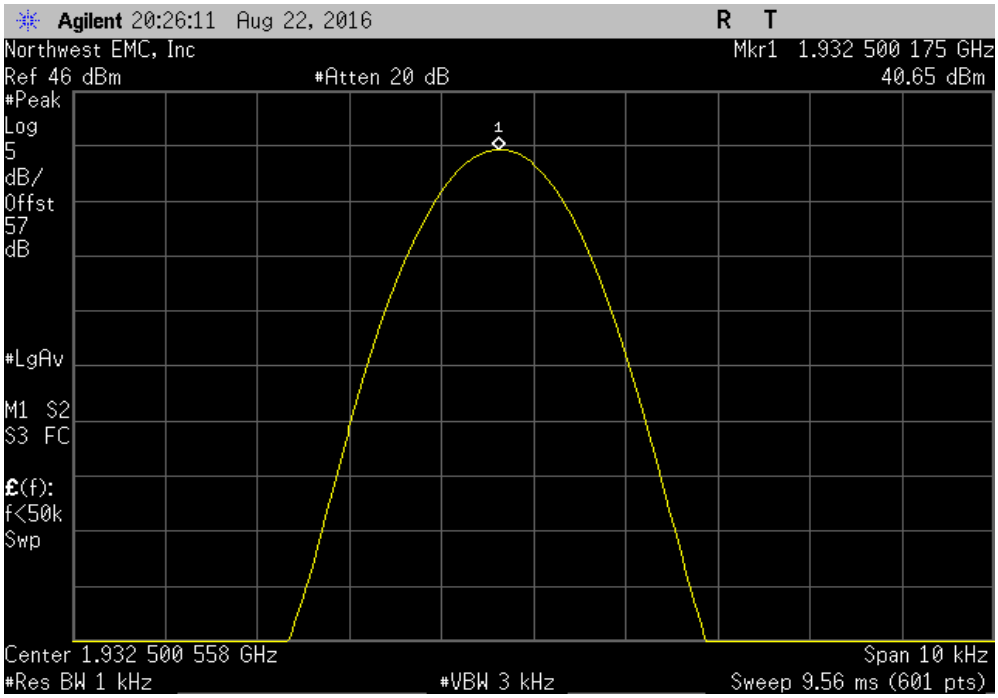


FREQUENCY STABILITY - LTE BAND 2

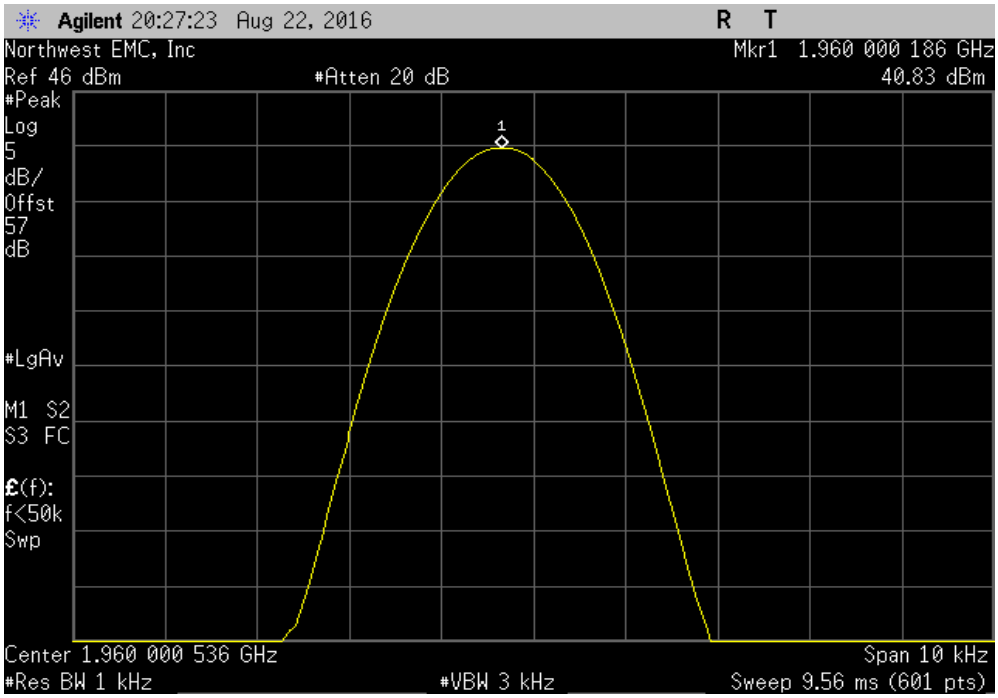
NORTHWEST EMC

XMit 2016.05.06

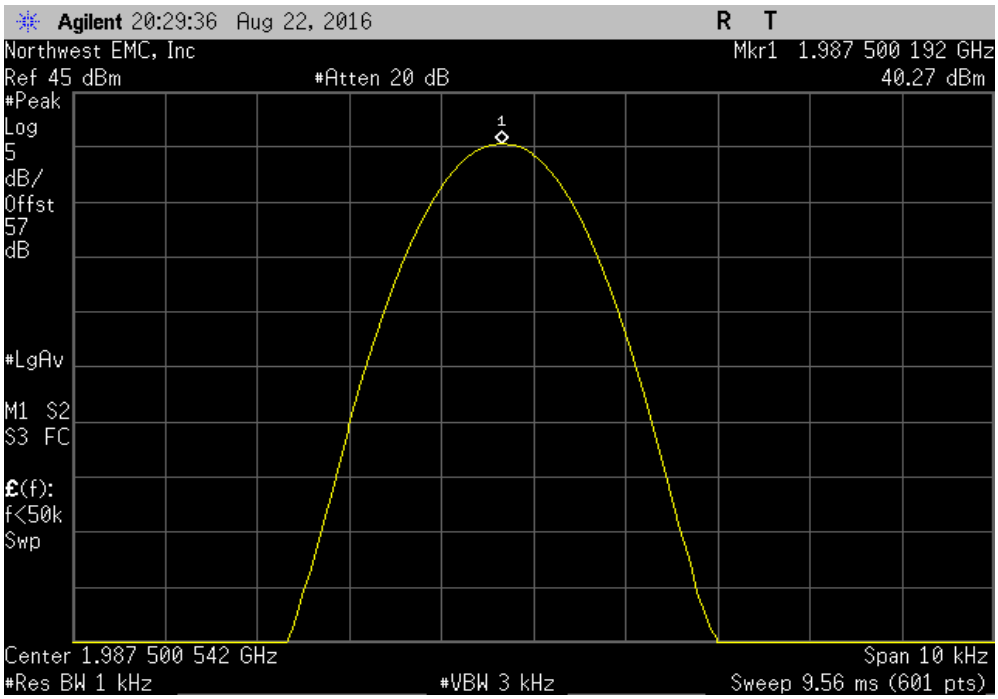
Port 1, Extreme Temperature, +20°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



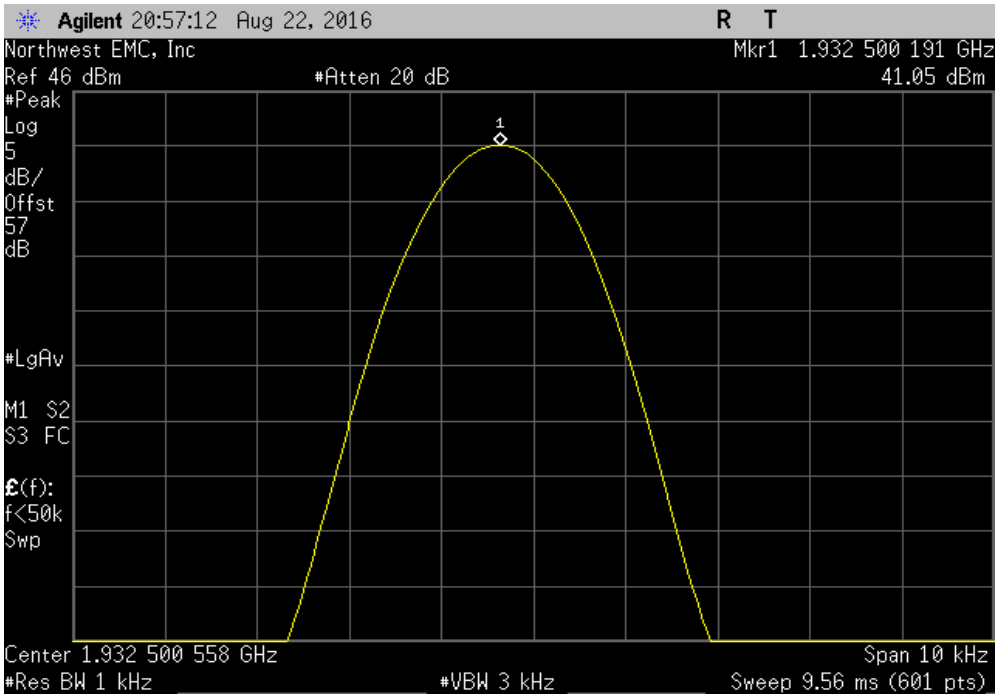
Port 1, Extreme Temperature, +20°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 1, Extreme Temperature, +20°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 1, Extreme Temperature, +30°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass

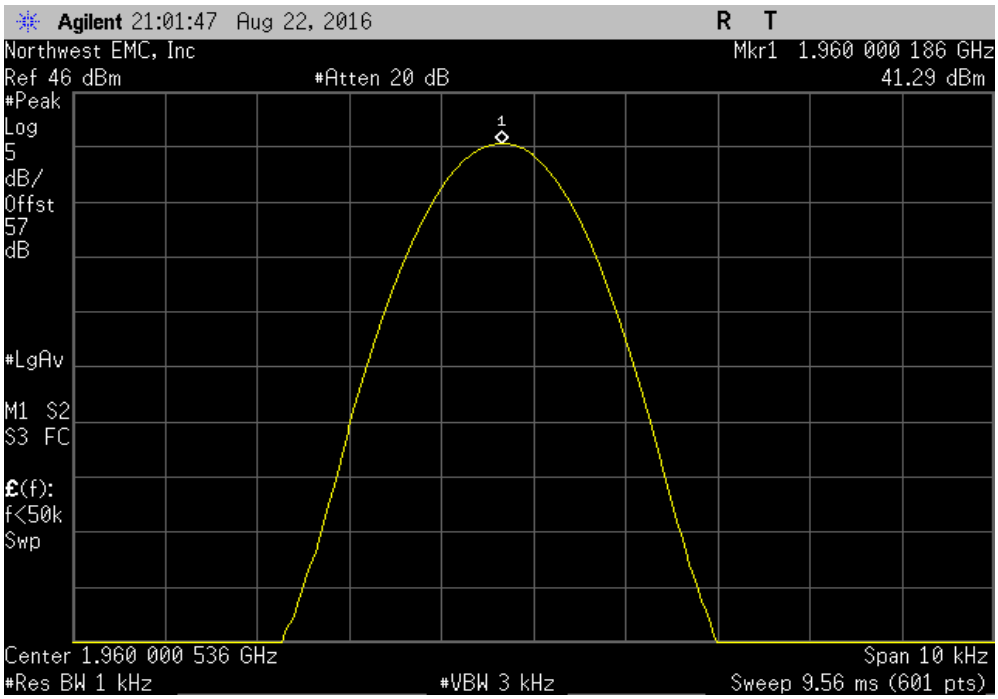


FREQUENCY STABILITY - LTE BAND 2

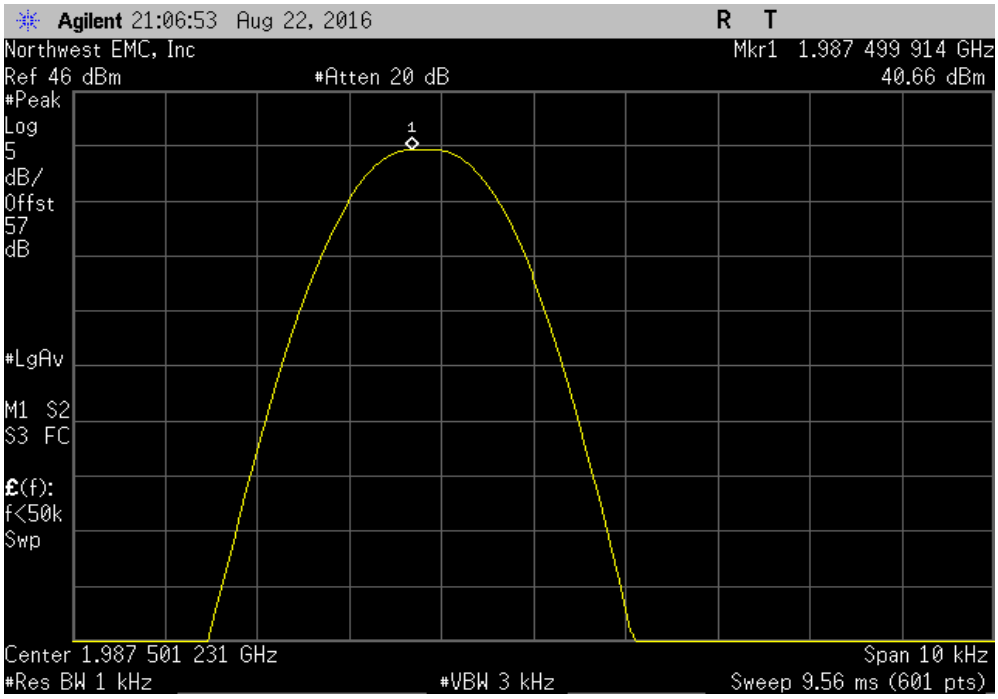
NORTHWEST EMC

XMit 2016.05.06

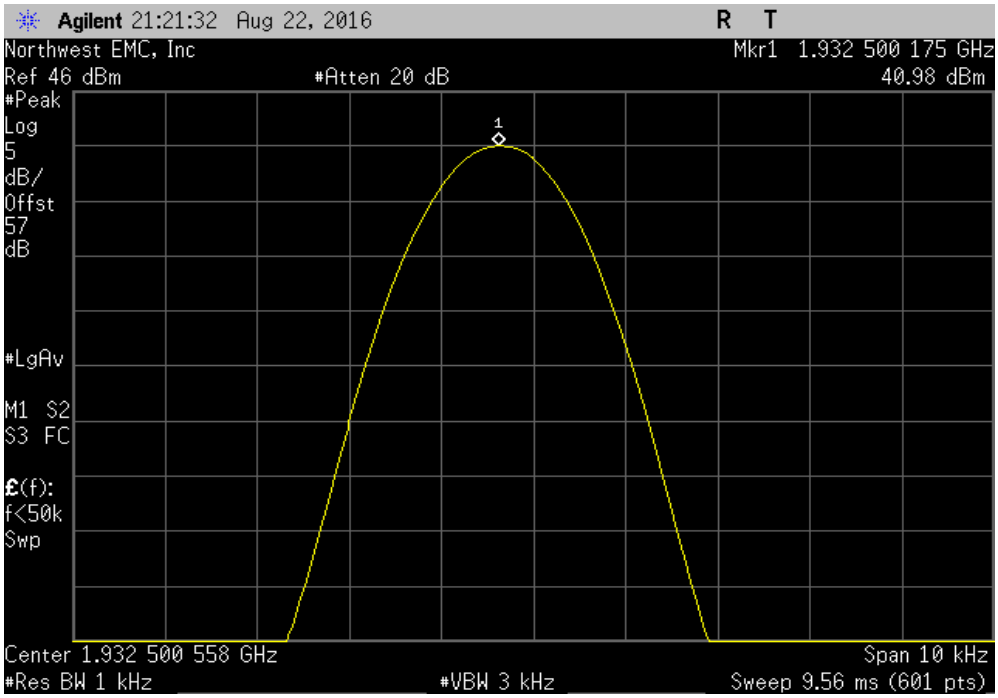
Port 1, Extreme Temperature, +30°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



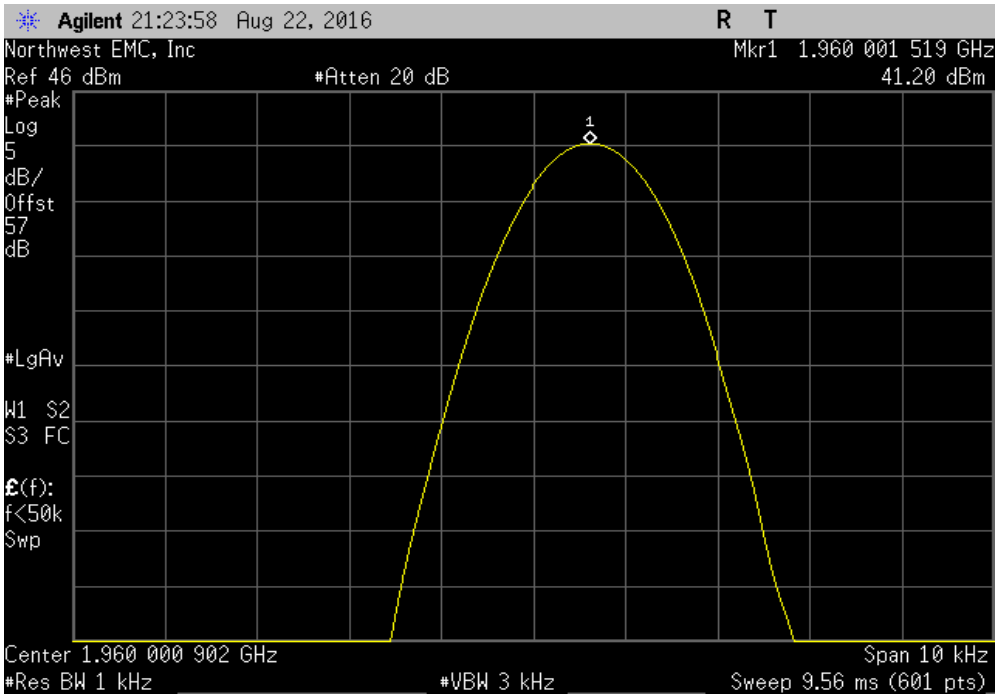
Port 1, Extreme Temperature, +30°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.499914	1987.5	0	1	Pass



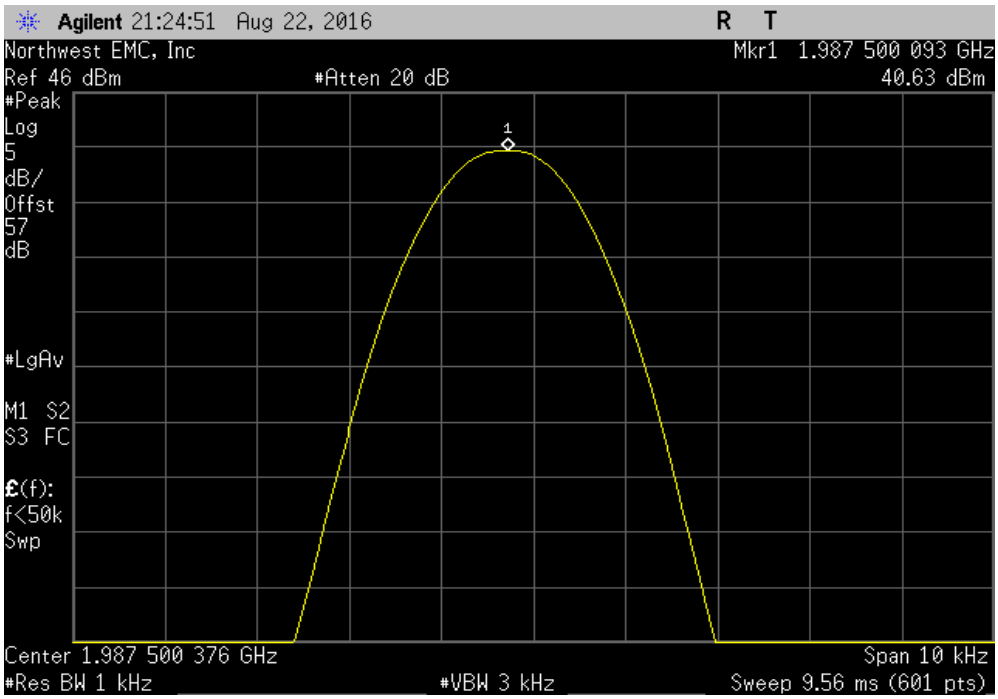
Port 1, Extreme Temperature, +40°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



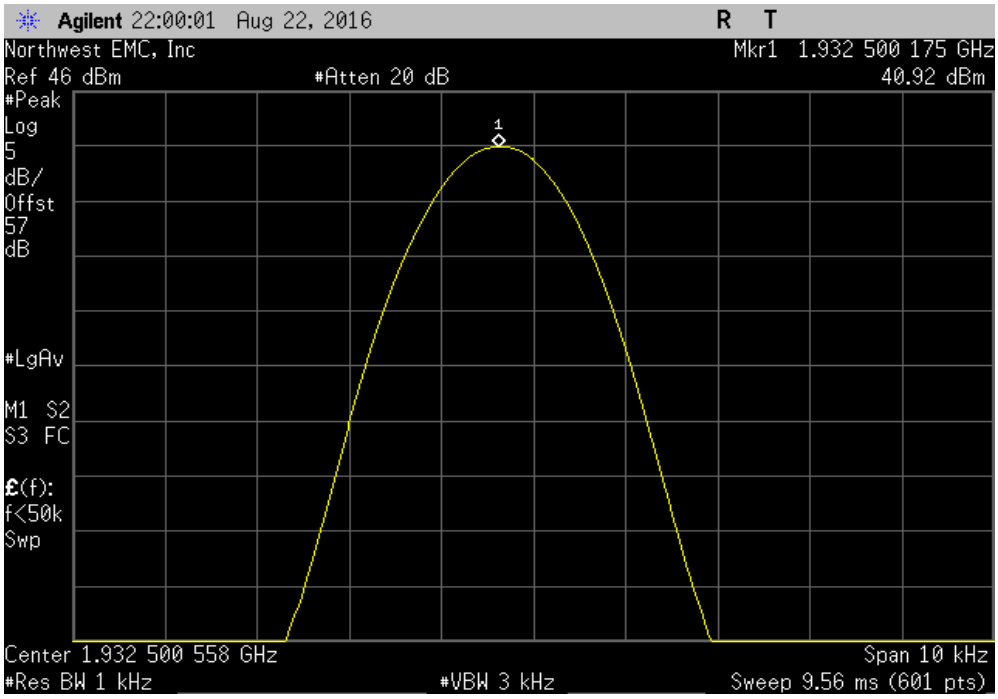
Port 1, Extreme Temperature, +40°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.001519	1960	0.8	1	Pass



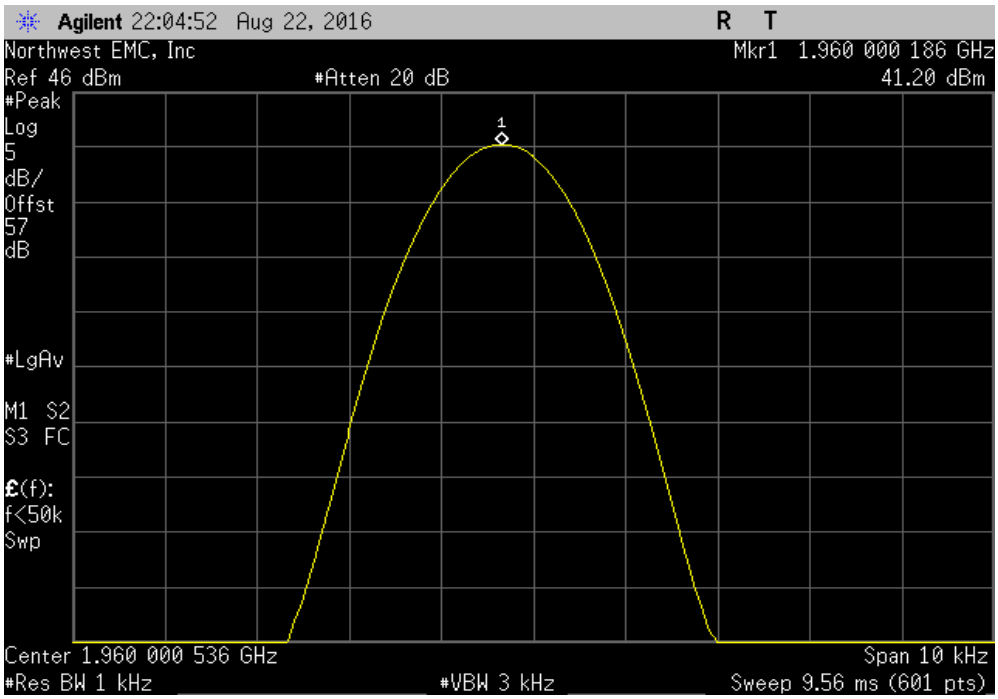
Port 1, Extreme Temperature, +40°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500093	1987.5	0.1	1	Pass



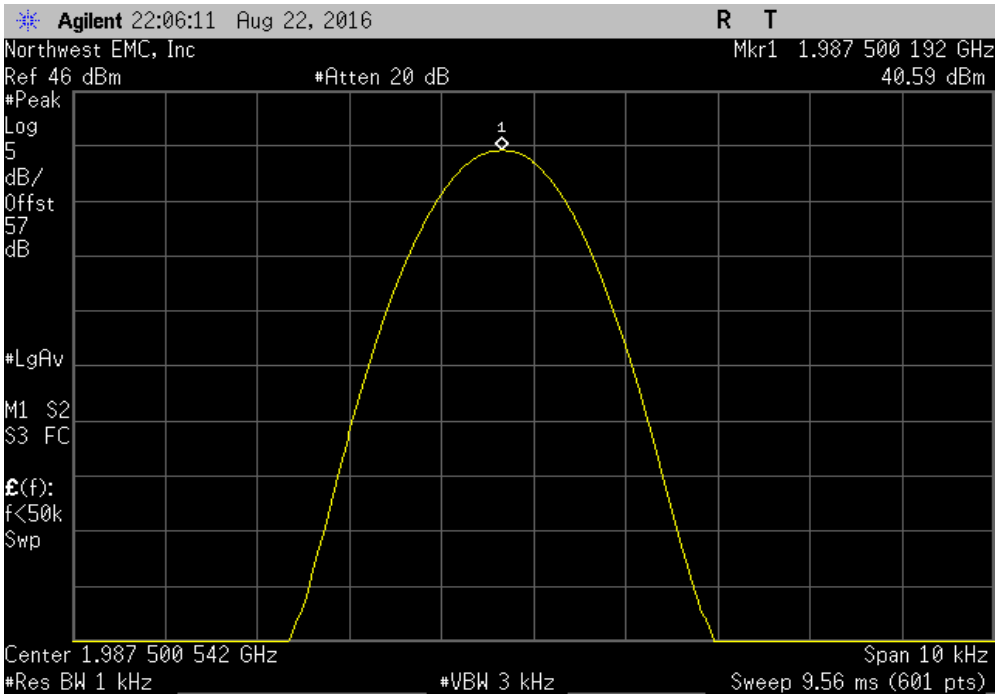
Port 1, Extreme Temperature, +50°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



Port 1, Extreme Temperature, +50°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 1, Extreme Temperature, +50°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass

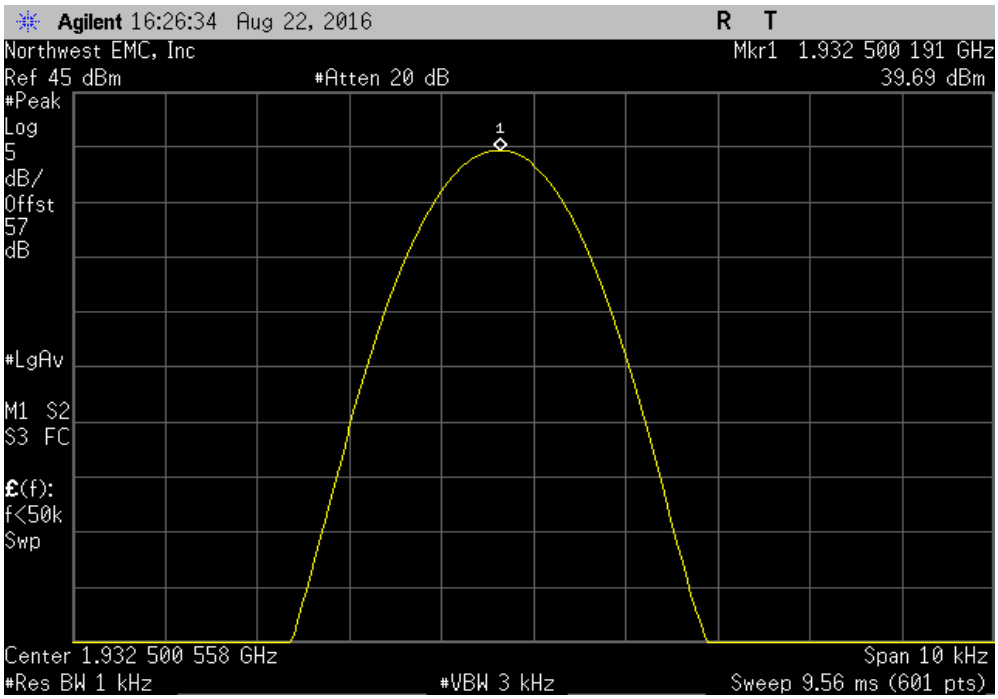


FREQUENCY STABILITY - LTE BAND 2

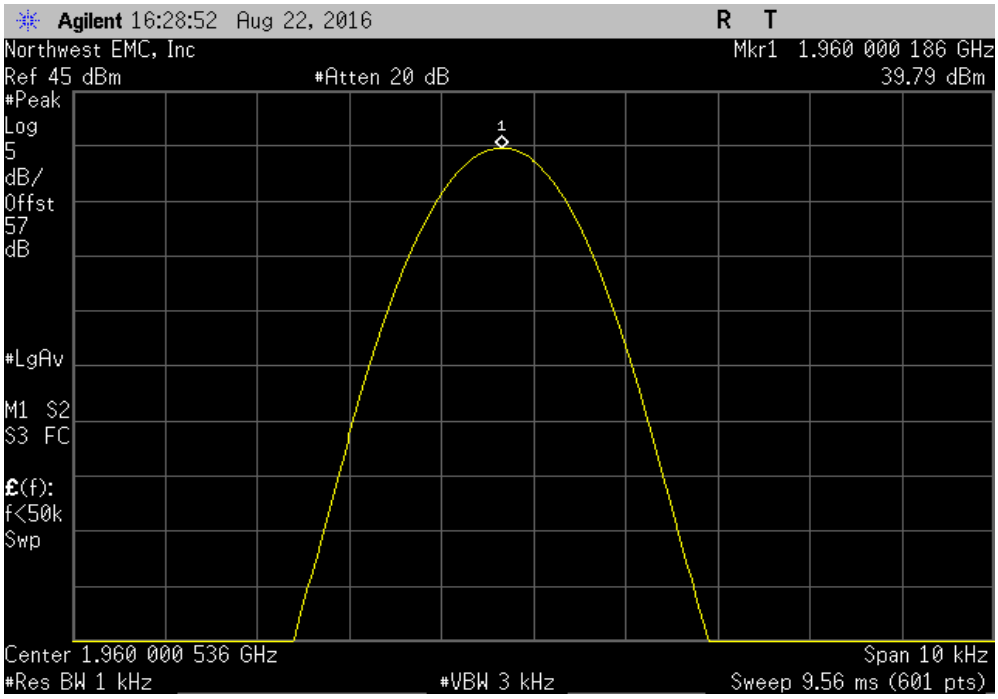
NORTHWEST EMC

XMit 2016.05.06

Port 2, Normal Temperature and Voltage, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



Port 2, Normal Temperature and Voltage, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass

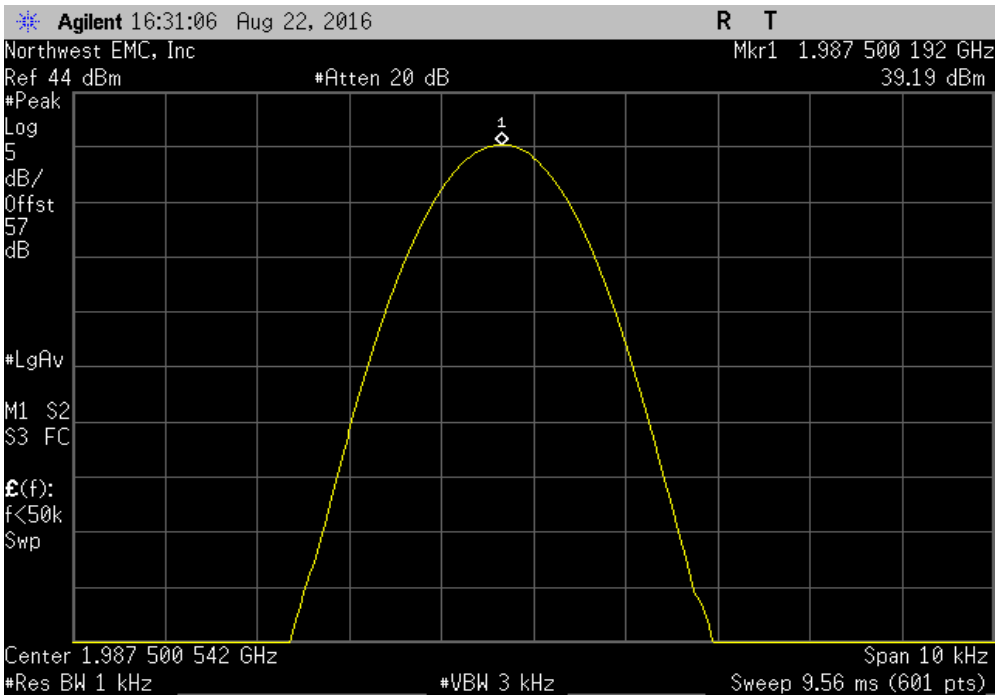


FREQUENCY STABILITY - LTE BAND 2

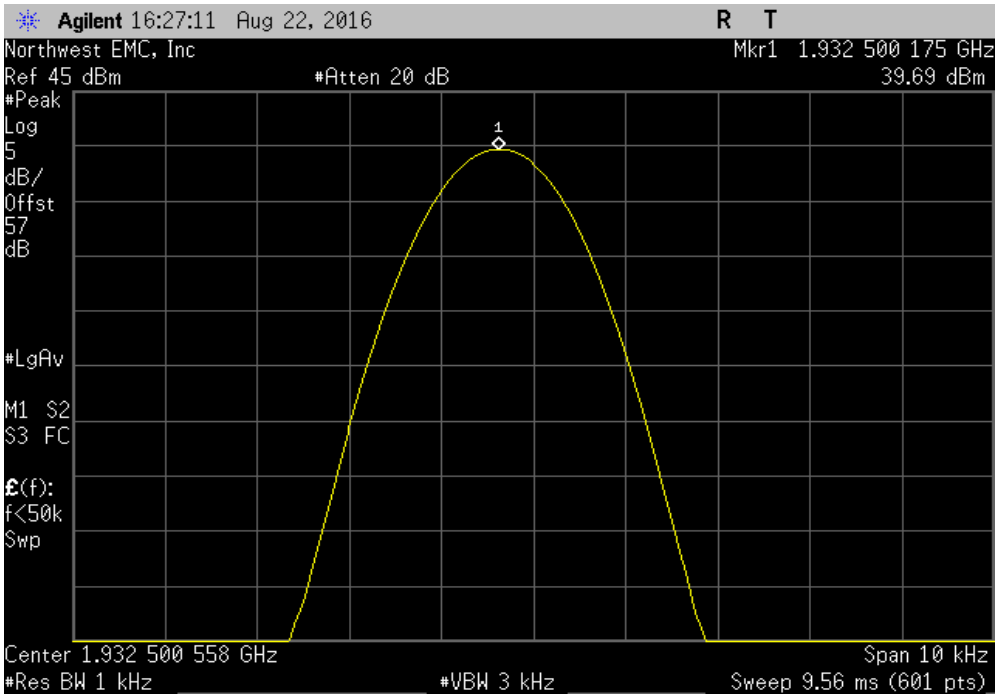
NORTHWEST EMC

XMit 2016.05.06

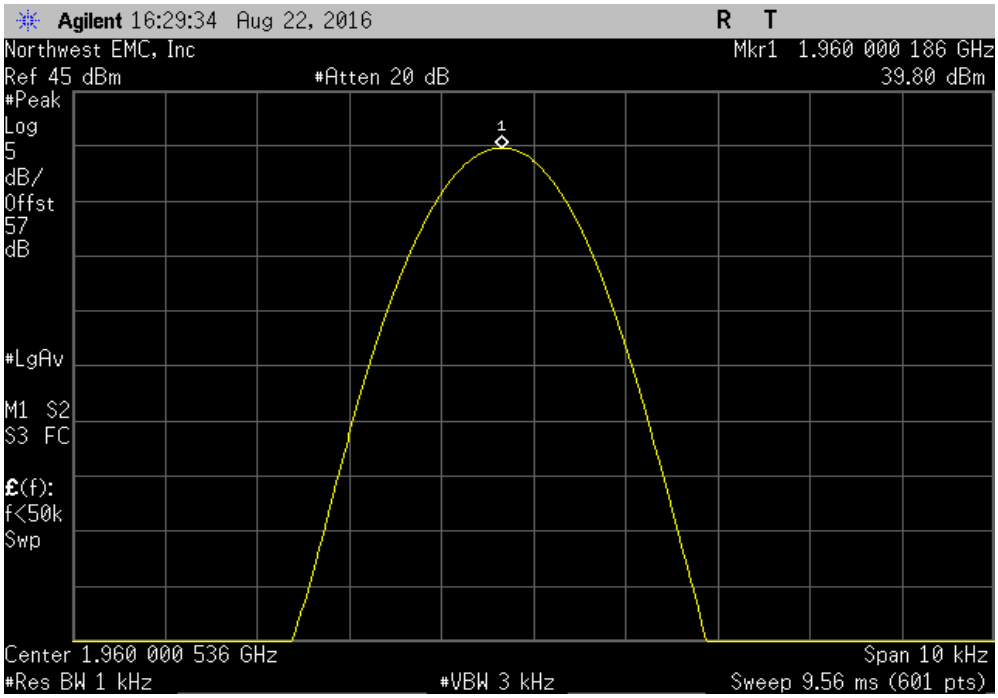
Port 2, Normal Temperature and Voltage, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



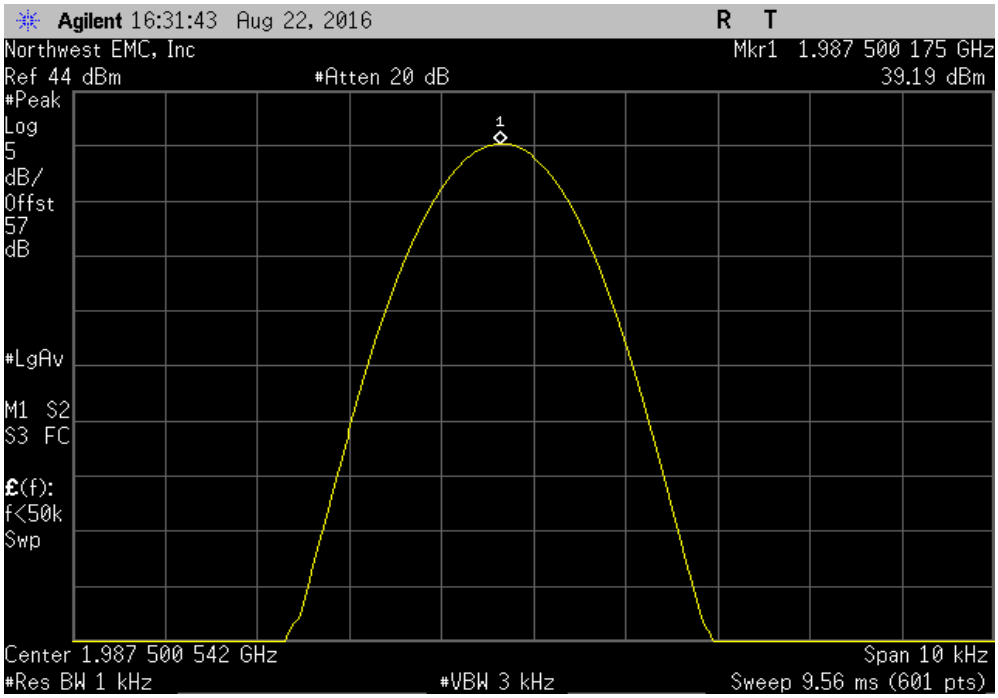
Port 2, Extreme Voltage, 55.2 VDC, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



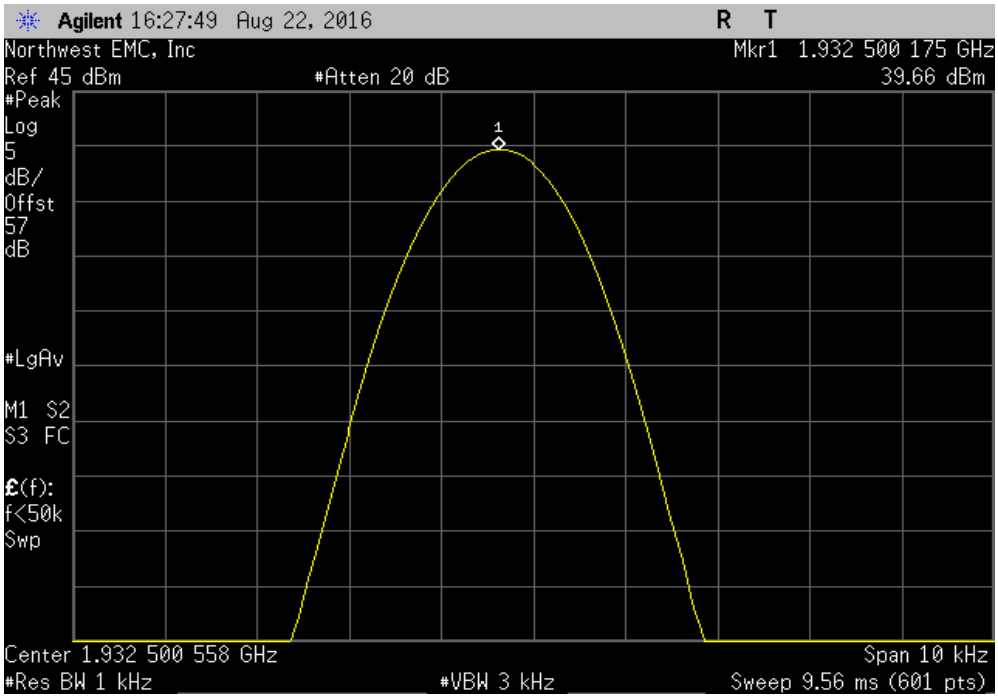
Port 2, Extreme Voltage, 55.2 VDC, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



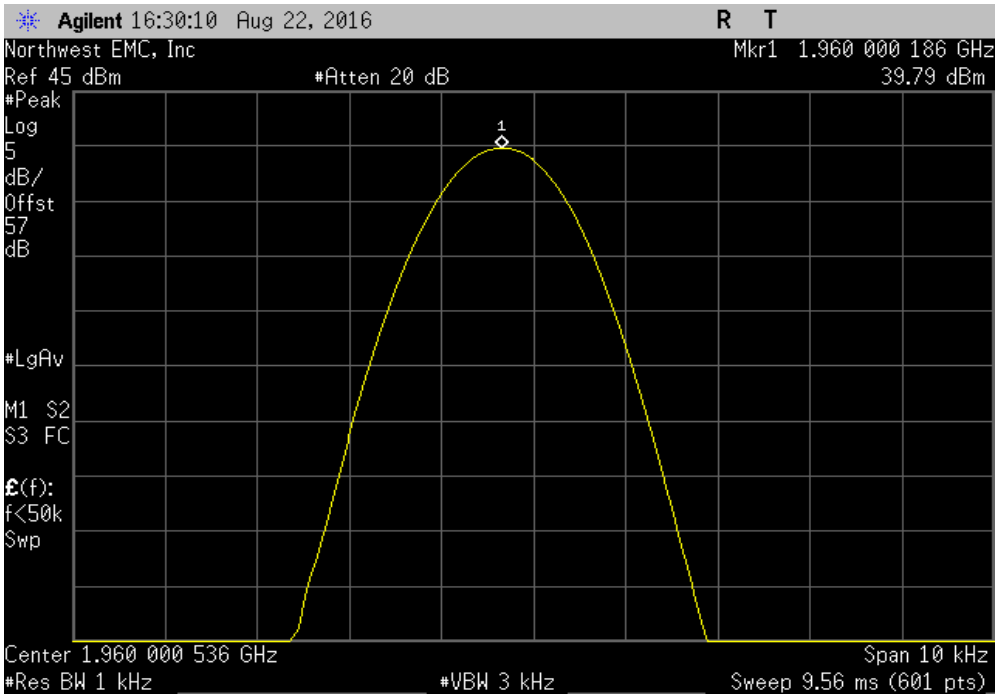
Port 2, Extreme Voltage, 55.2 VDC, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass



Port 2, Extreme Voltage, 40.8 VAC, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



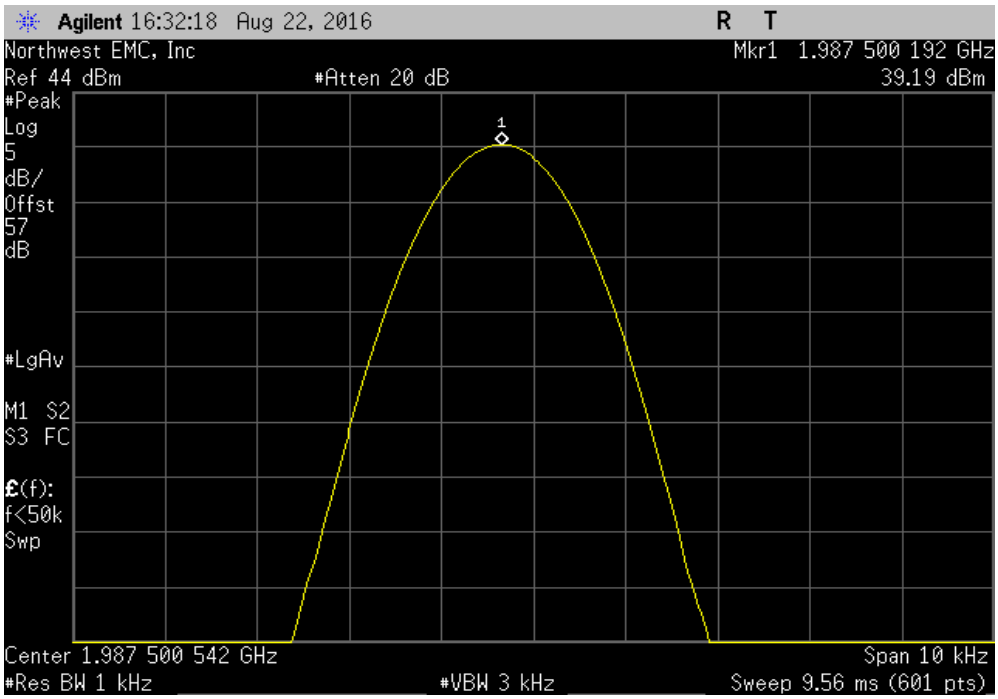
Port 2, Extreme Voltage, 40.8 VAC, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



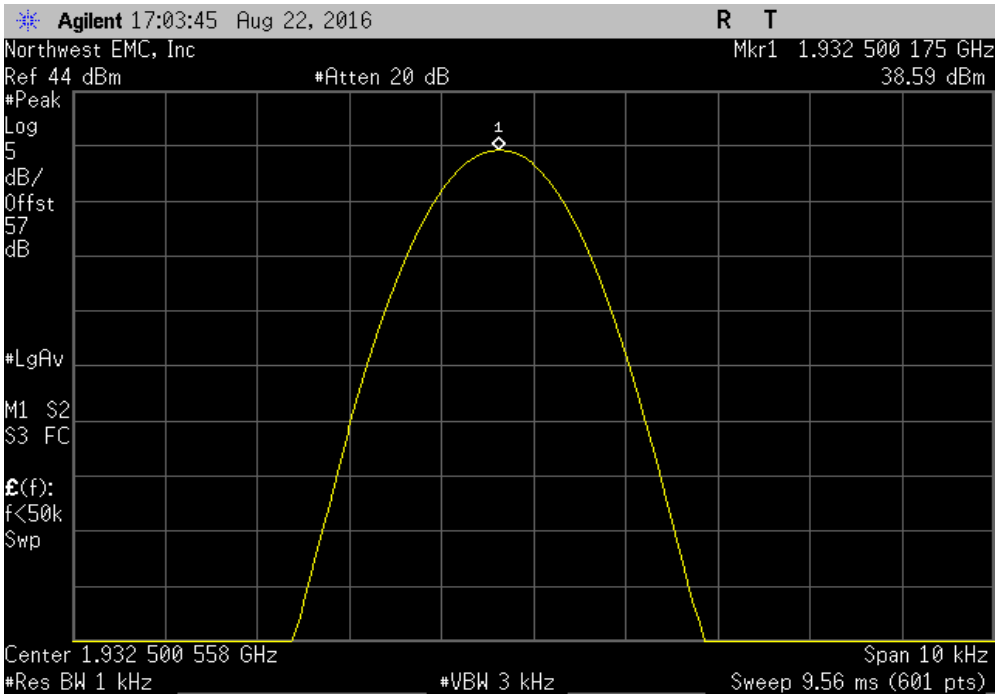
FREQUENCY STABILITY - LTE BAND 2

XMit 2016.05.06

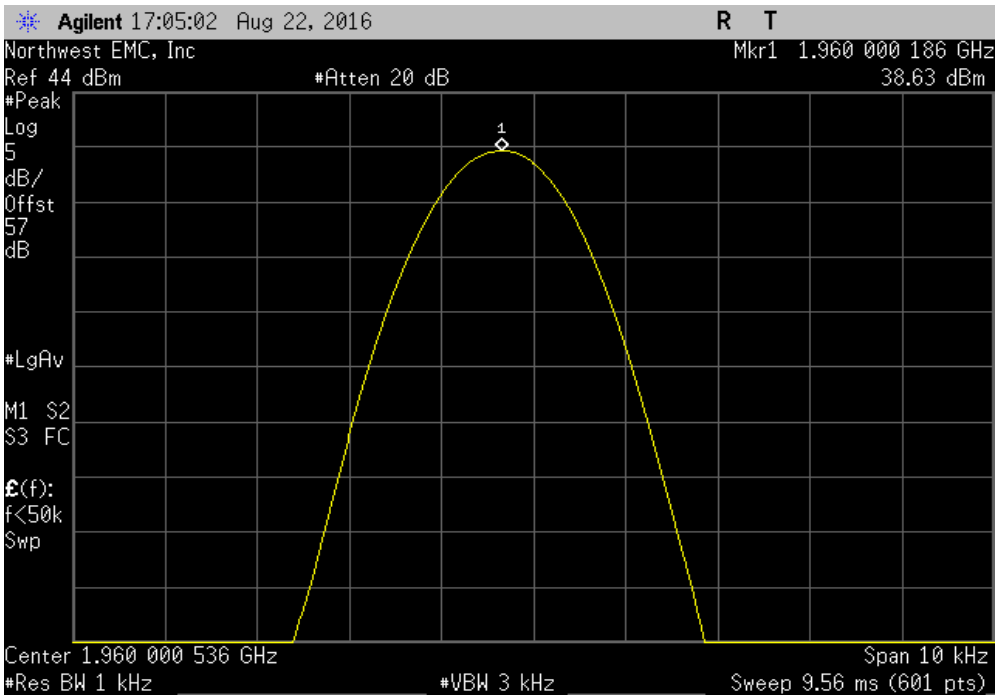
Port 2, Extreme Voltage, 40.8 VAC, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



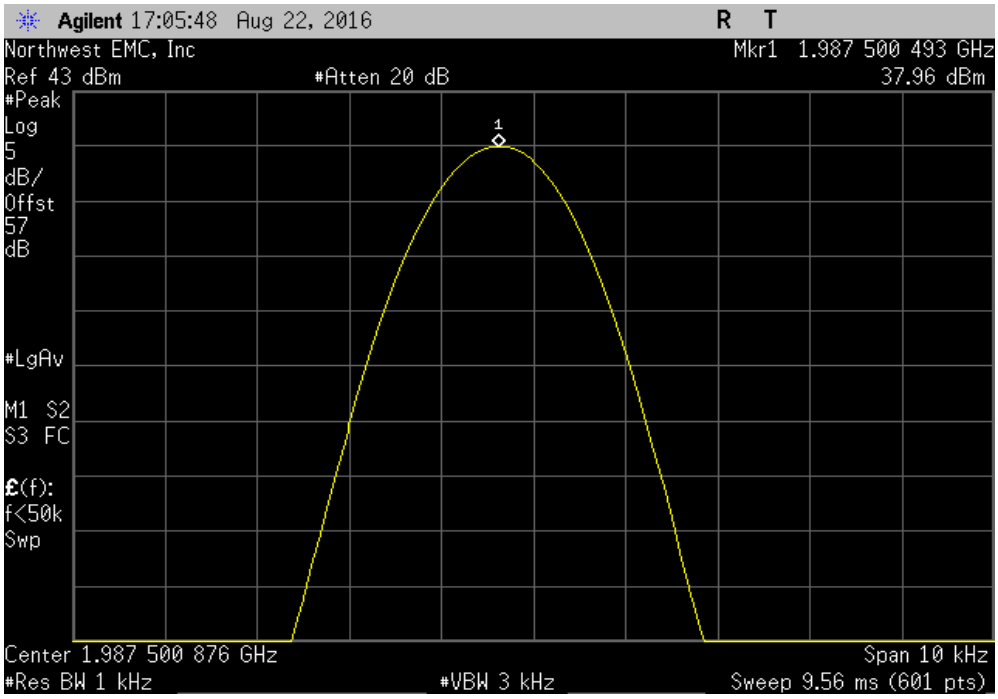
Port 2, Extreme Temperature, -30°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



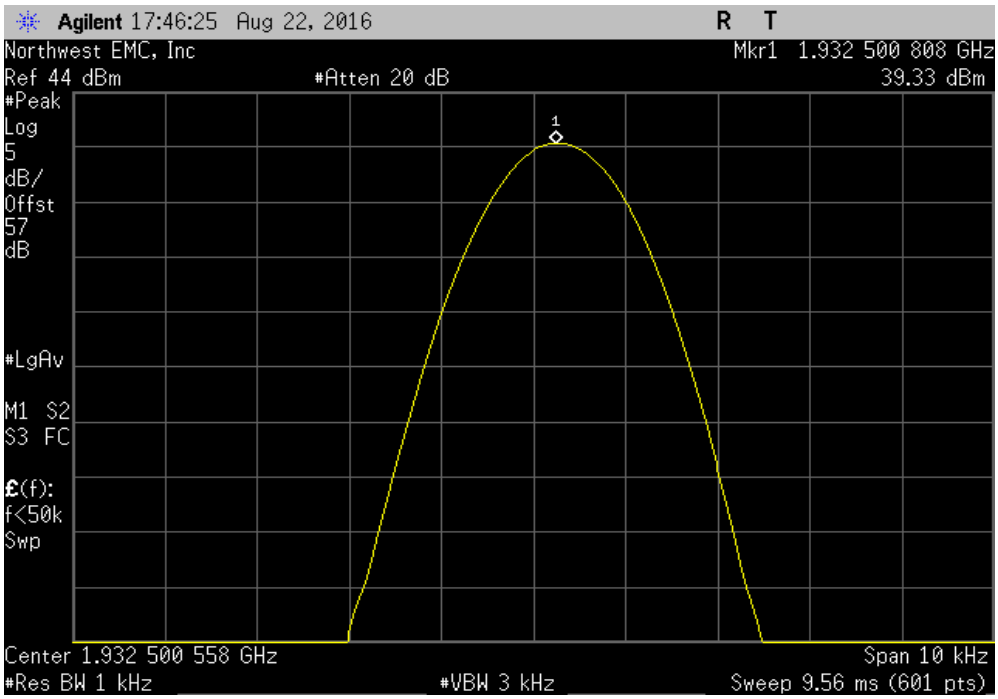
Port 2, Extreme Temperature, -30°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



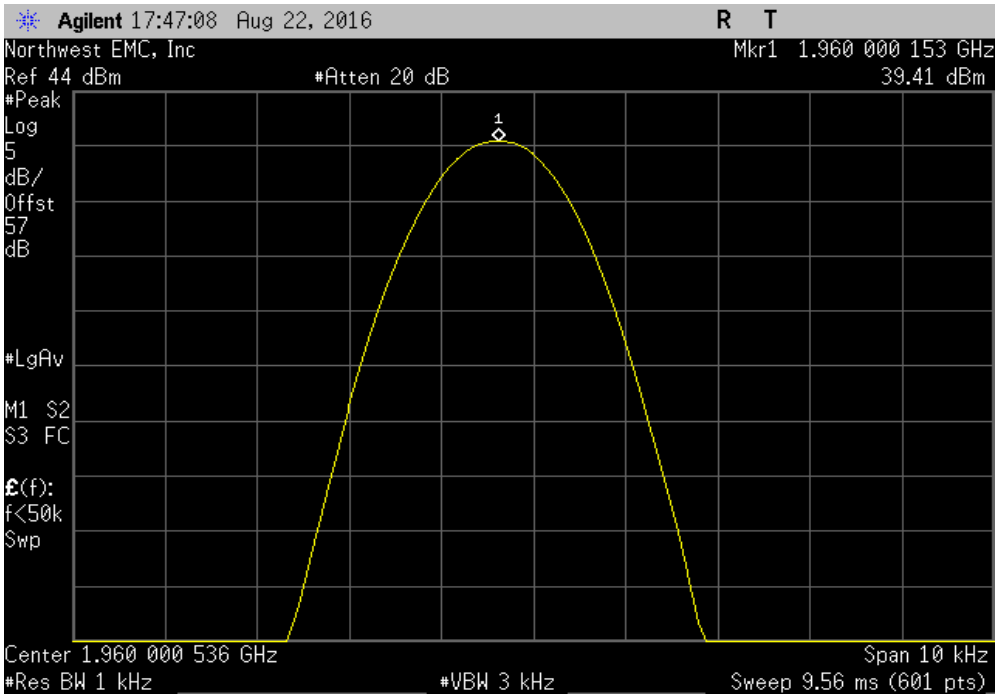
Port 2, Extreme Temperature, -30°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500493	1987.5	0.3	1	Pass



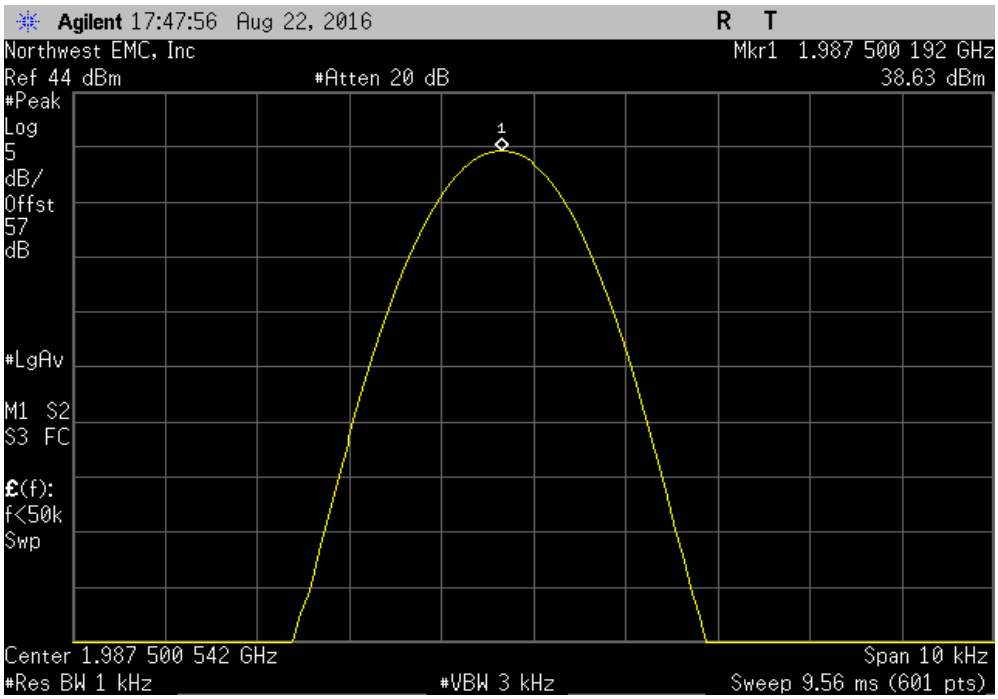
Port 2, Extreme Temperature, -20°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500808	1932.5	0.4	1	Pass



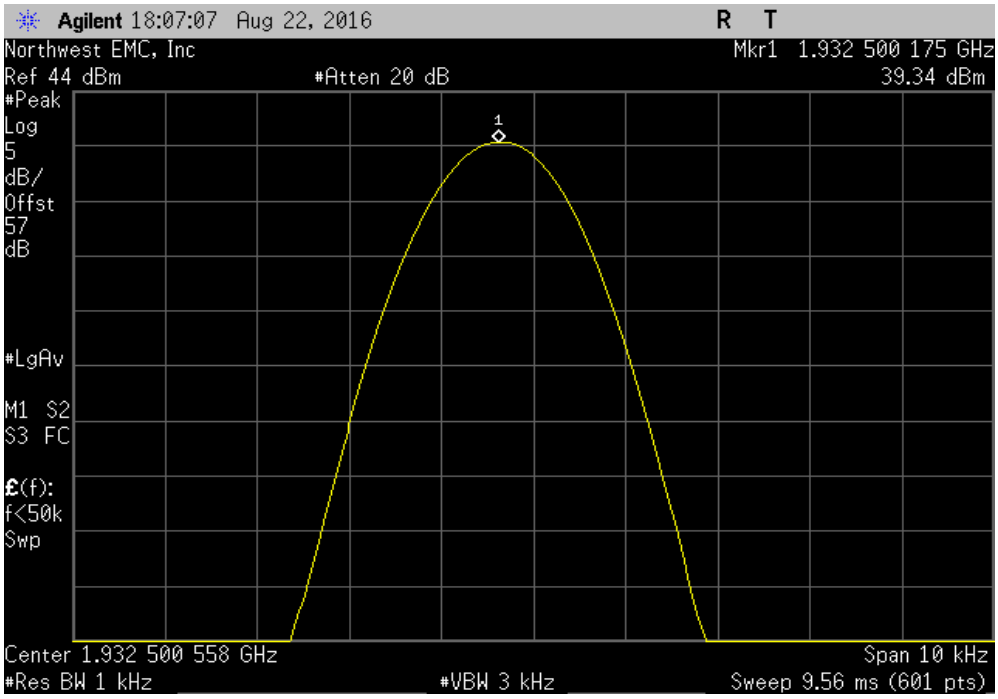
Port 2, Extreme Temperature, -20°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000153	1960	0.1	1	Pass



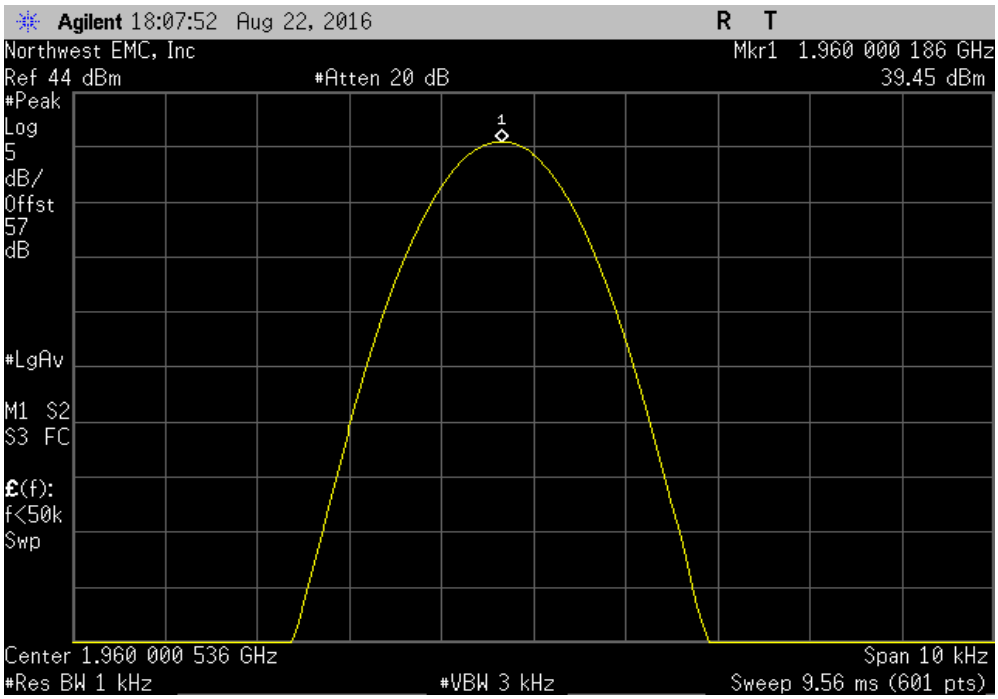
Port 2, Extreme Temperature, -20°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



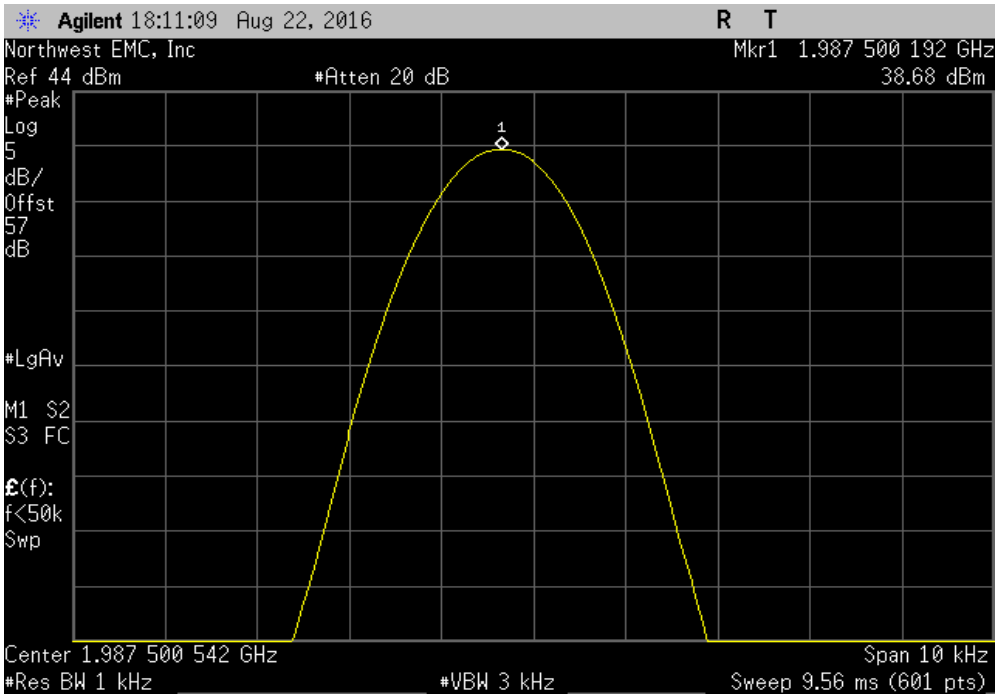
Port 2, Extreme Temperature, -10°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



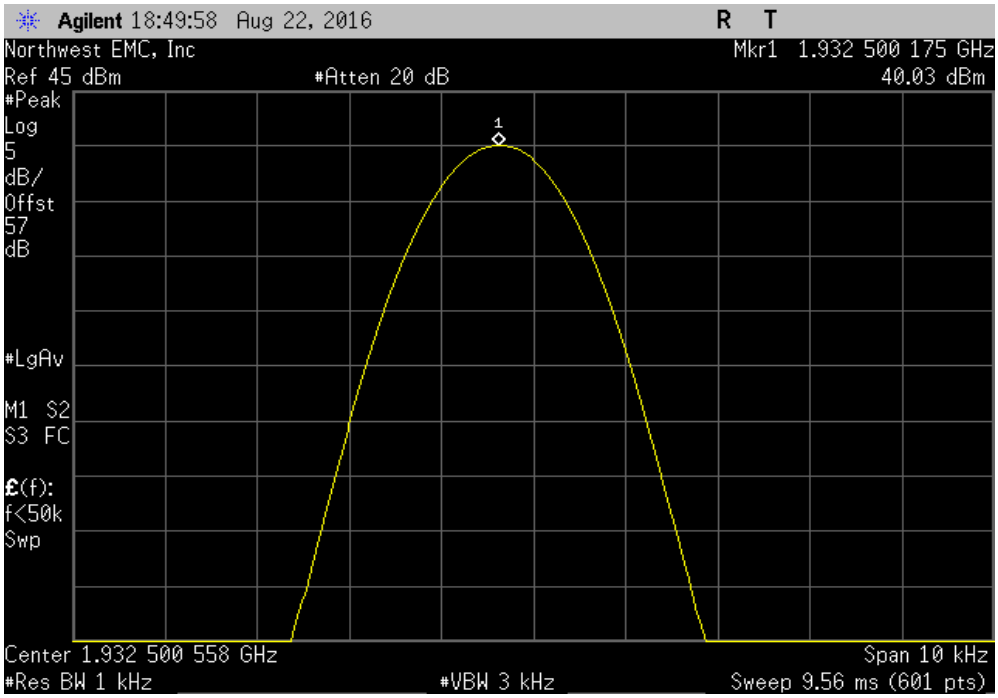
Port 2, Extreme Temperature, -10°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



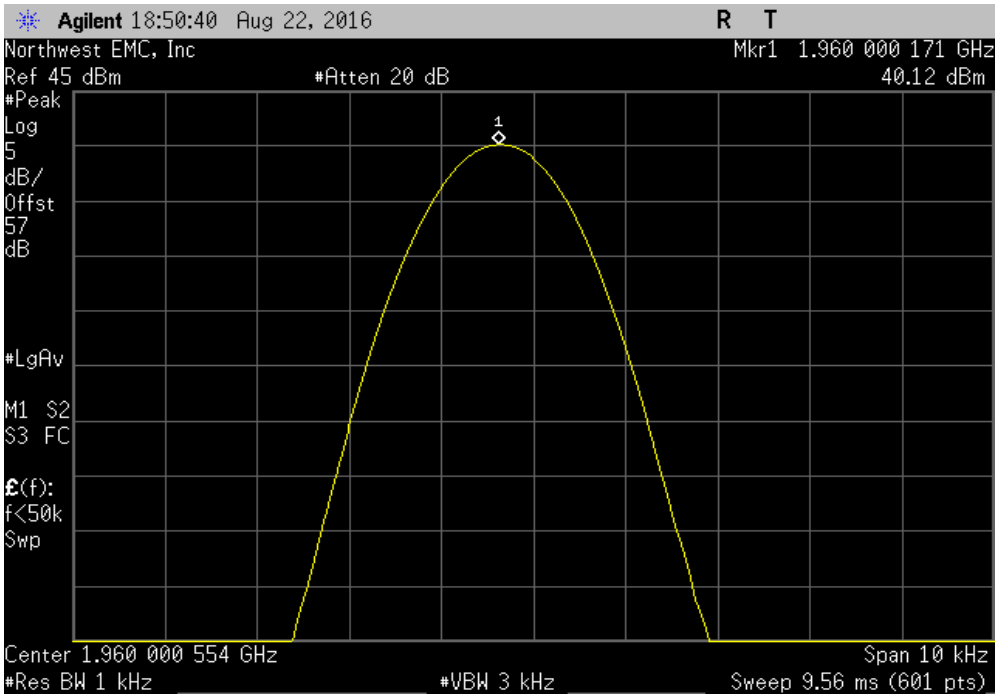
Port 2, Extreme Temperature, -10°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



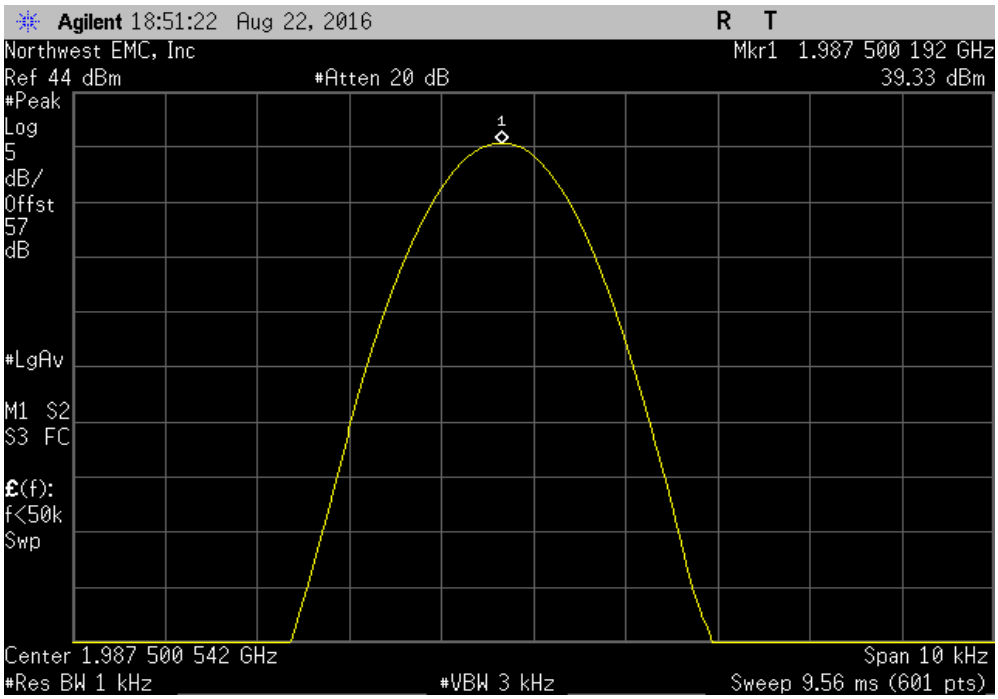
Port 2, Extreme Temperature, 0°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



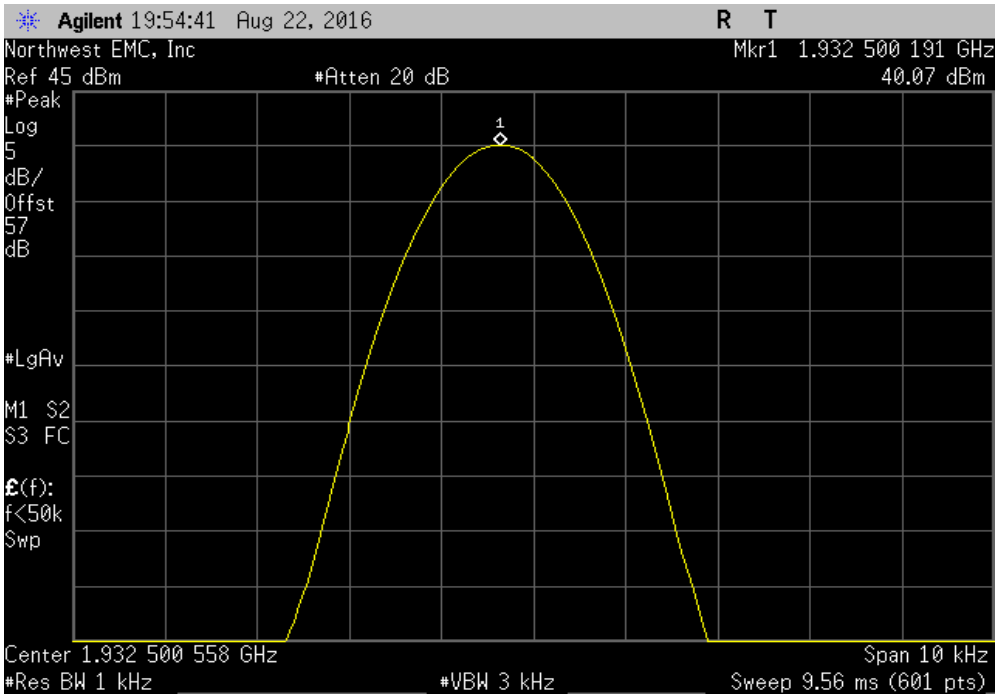
Port 2, Extreme Temperature, 0°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000171	1960	0.1	1	Pass



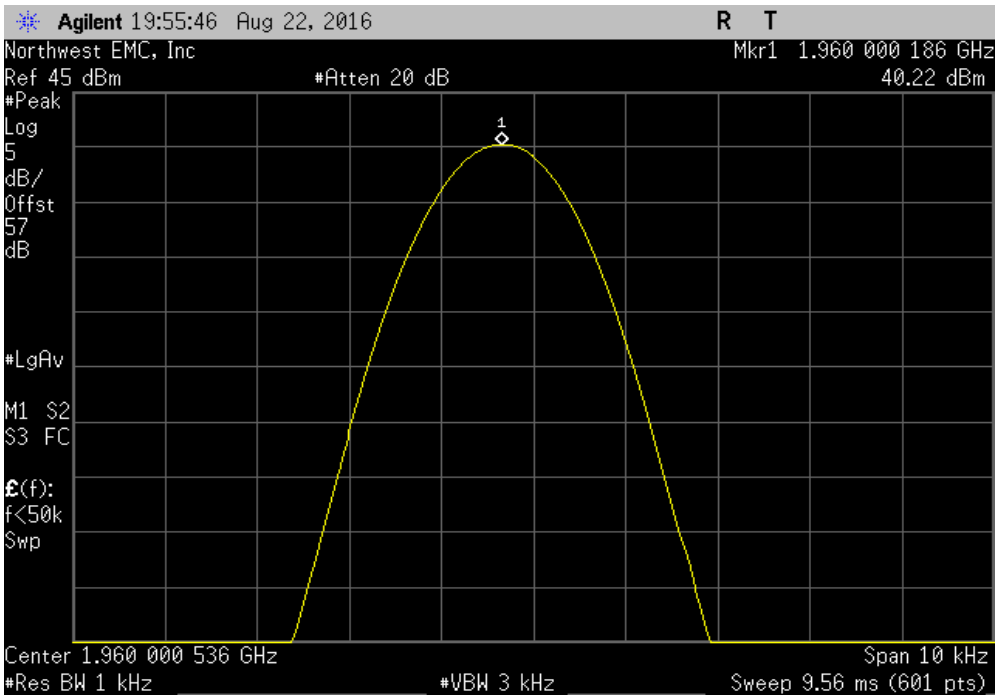
Port 2, Extreme Temperature, 0°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



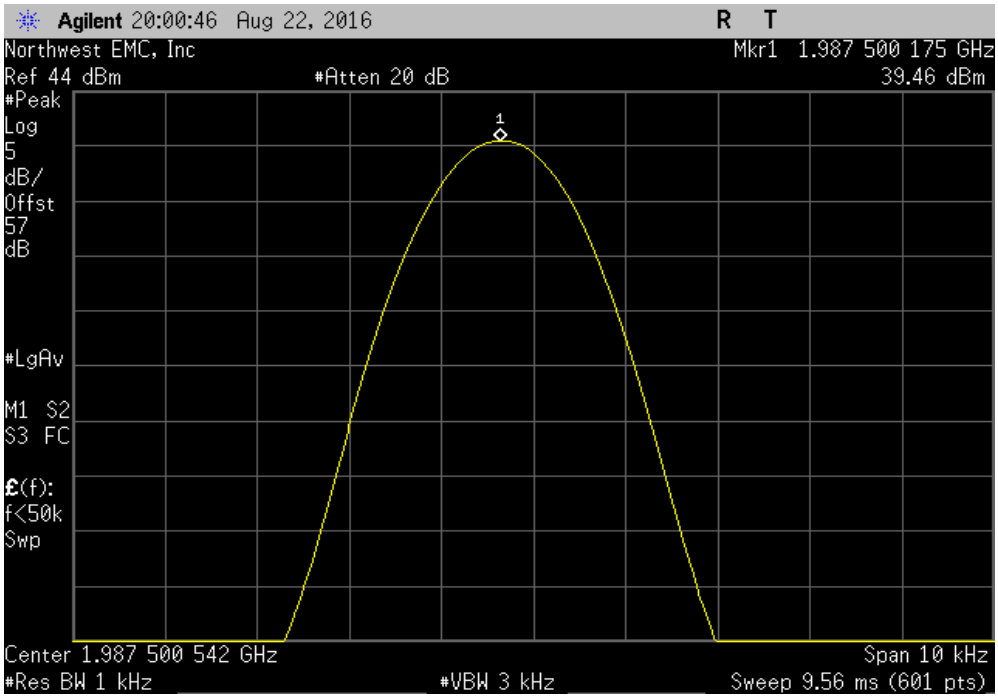
Port 2, Extreme Temperature, +10°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



Port 2, Extreme Temperature, +10°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 2, Extreme Temperature, +10°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass

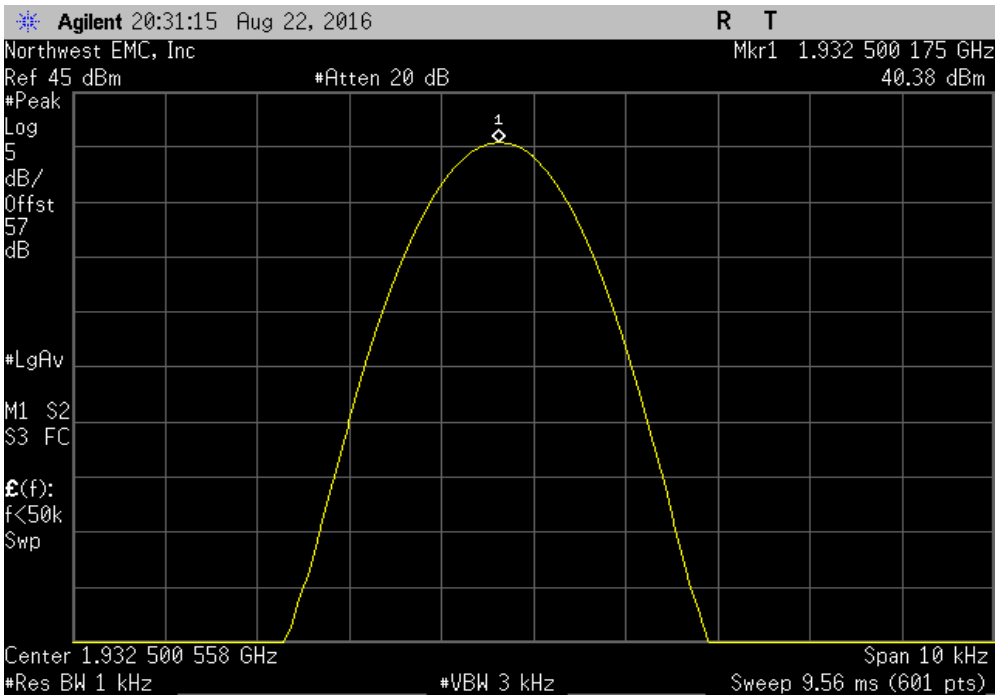


FREQUENCY STABILITY - LTE BAND 2

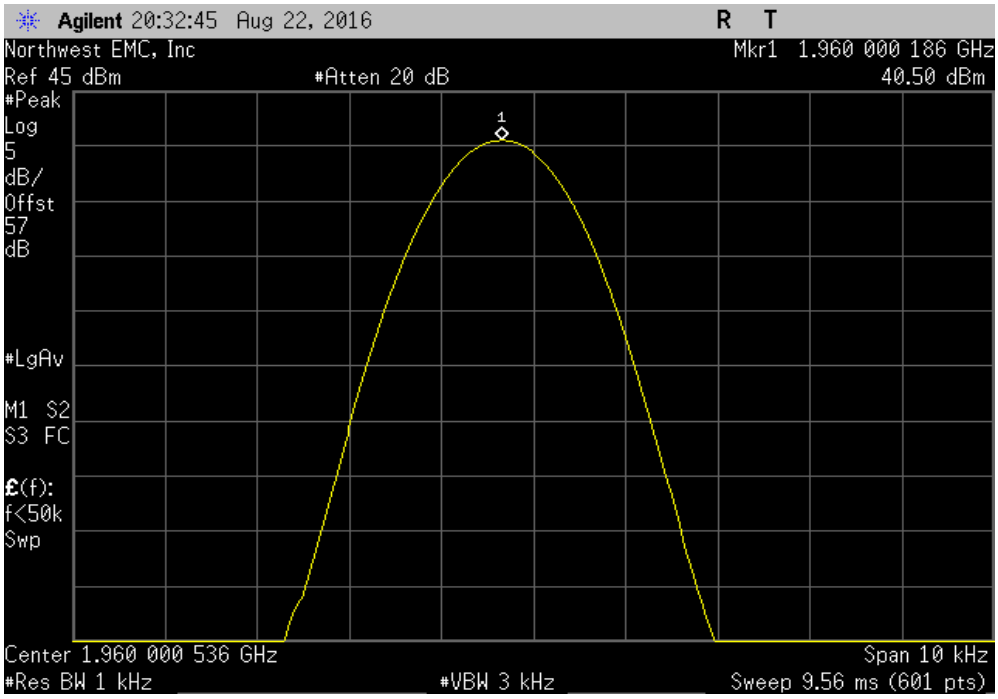
NORTHWEST EMC

XMit 2016.05.06

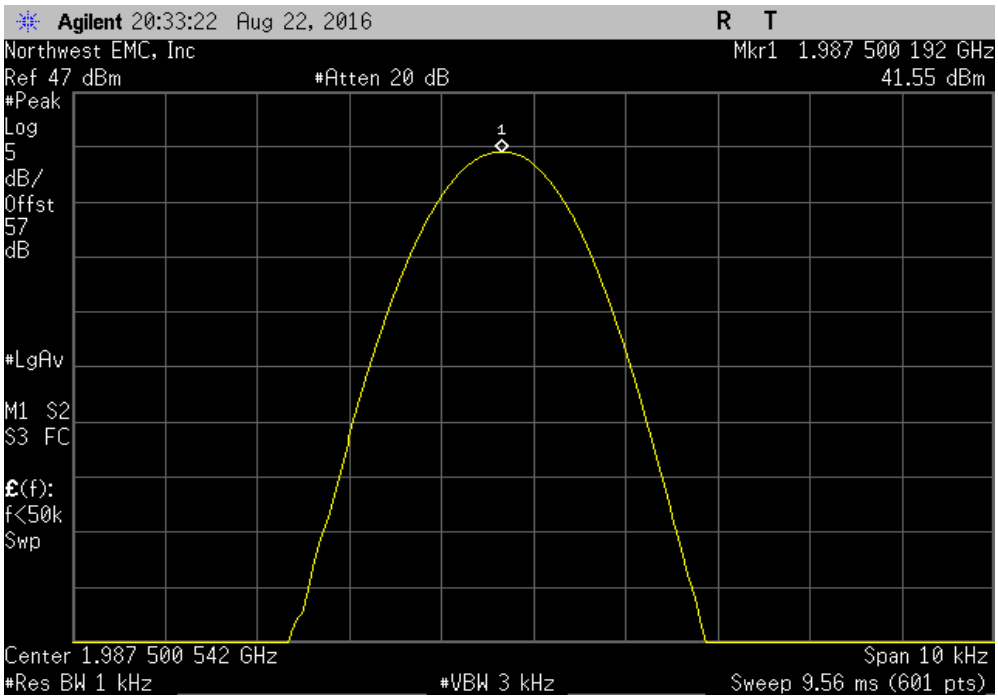
Port 2, Extreme Temperature, +20°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



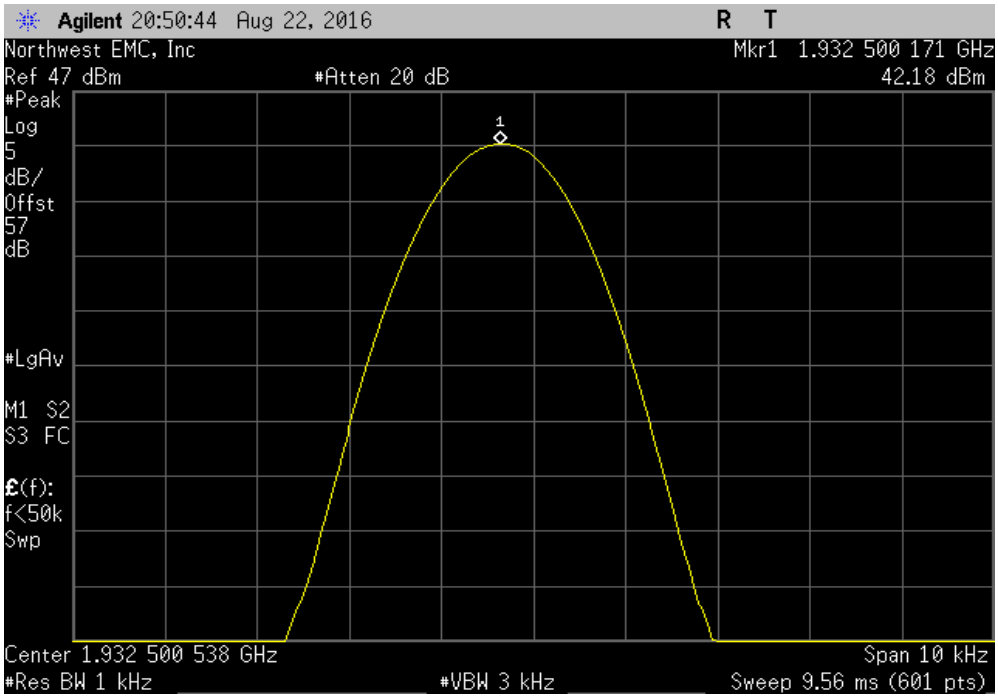
Port 2, Extreme Temperature, +20°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



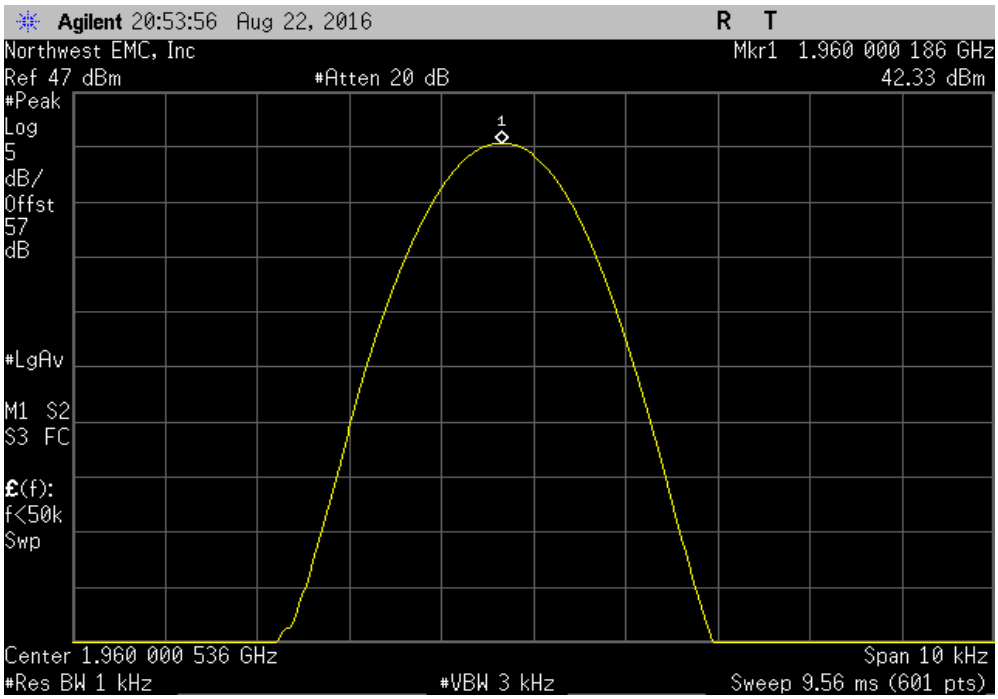
Port 2, Extreme Temperature, +20°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



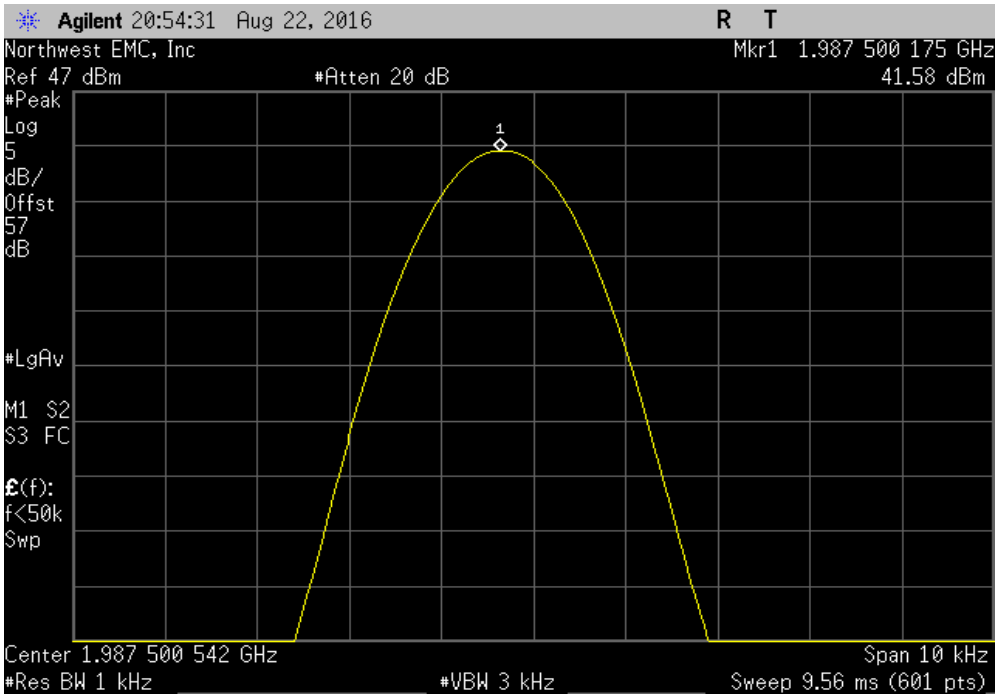
Port 2, Extreme Temperature, +30°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500171	1932.5	0.1	1	Pass



Port 2, Extreme Temperature, +30°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 2, Extreme Temperature, +30°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass

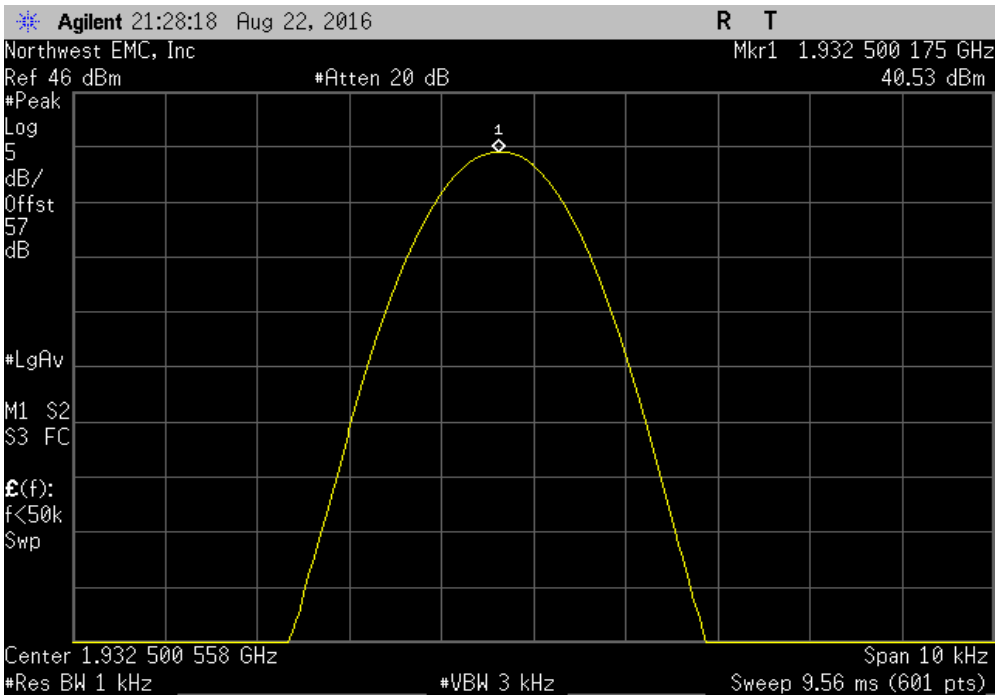


FREQUENCY STABILITY - LTE BAND 2

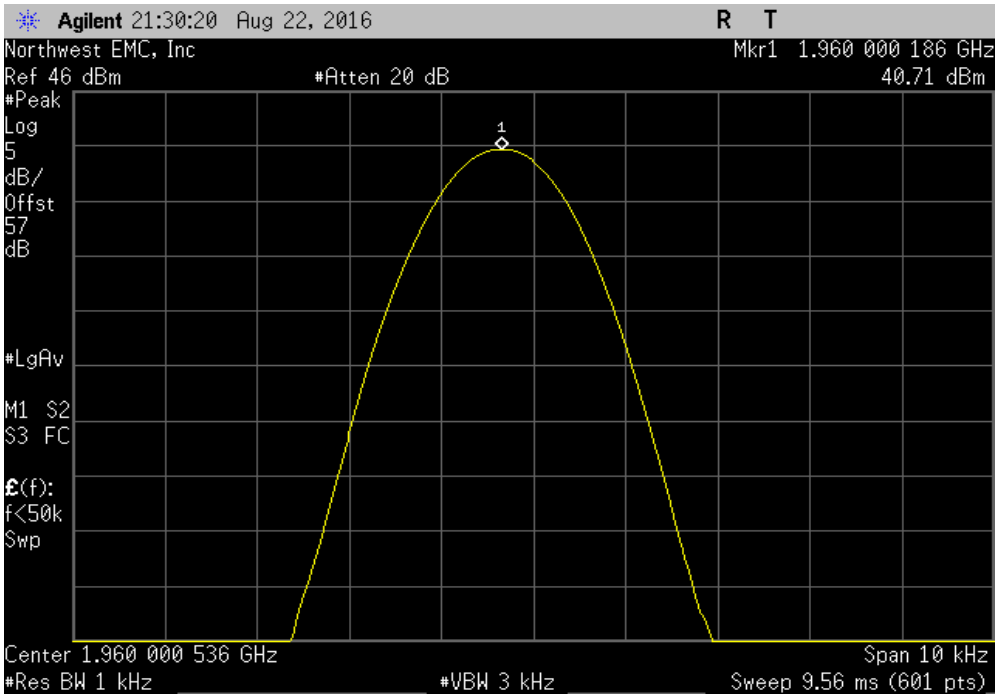
NORTHWEST EMC

XMit 2016.05.06

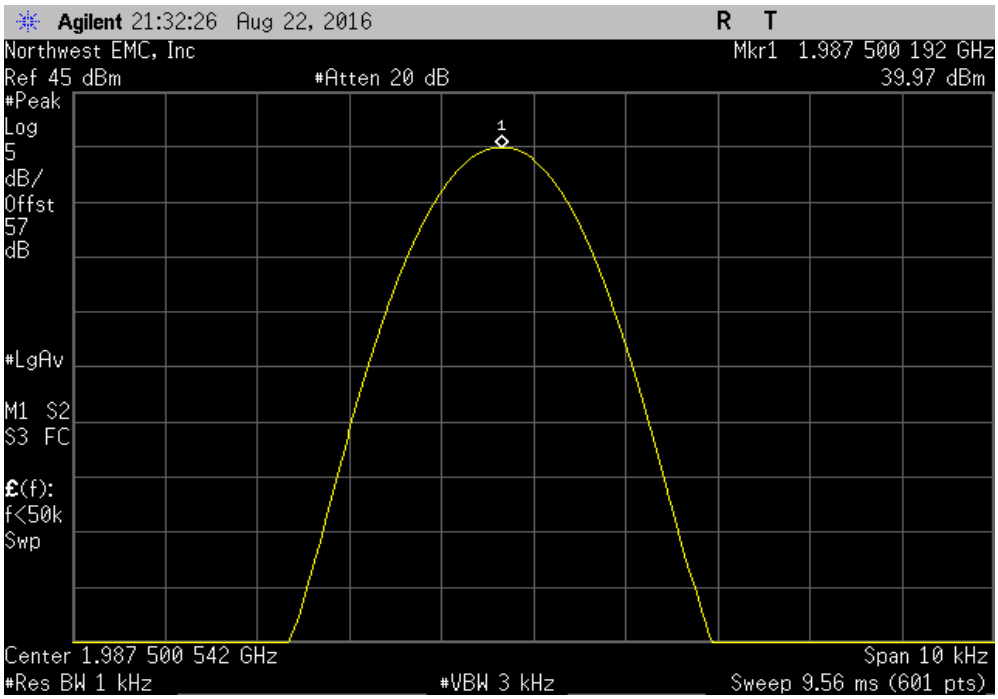
Port 2, Extreme Temperature, +40°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



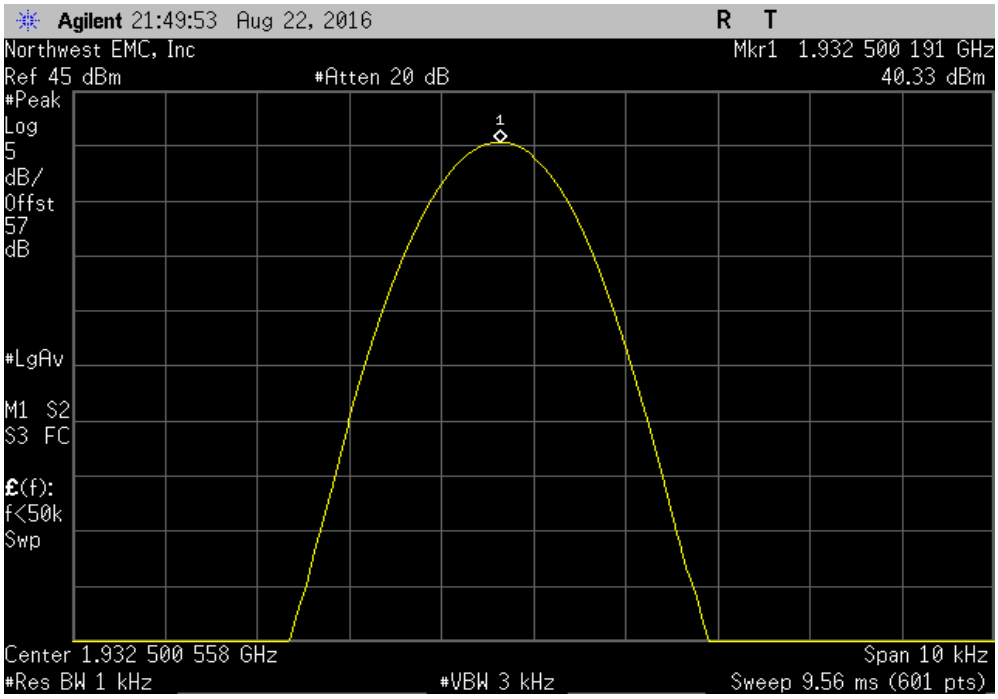
Port 2, Extreme Temperature, +40°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



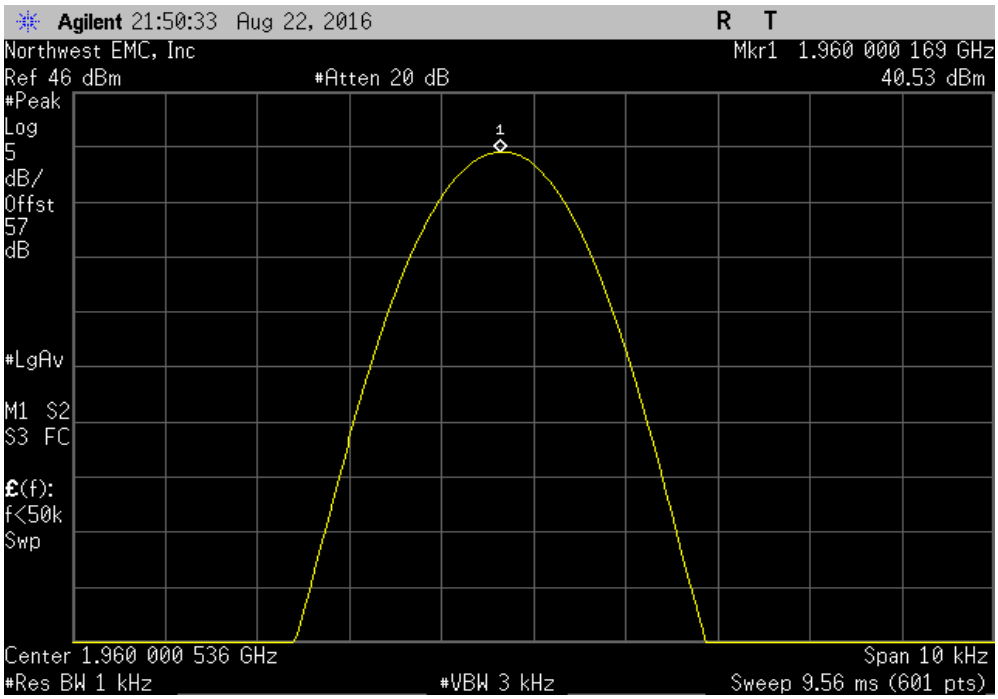
Port 2, Extreme Temperature, +40°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



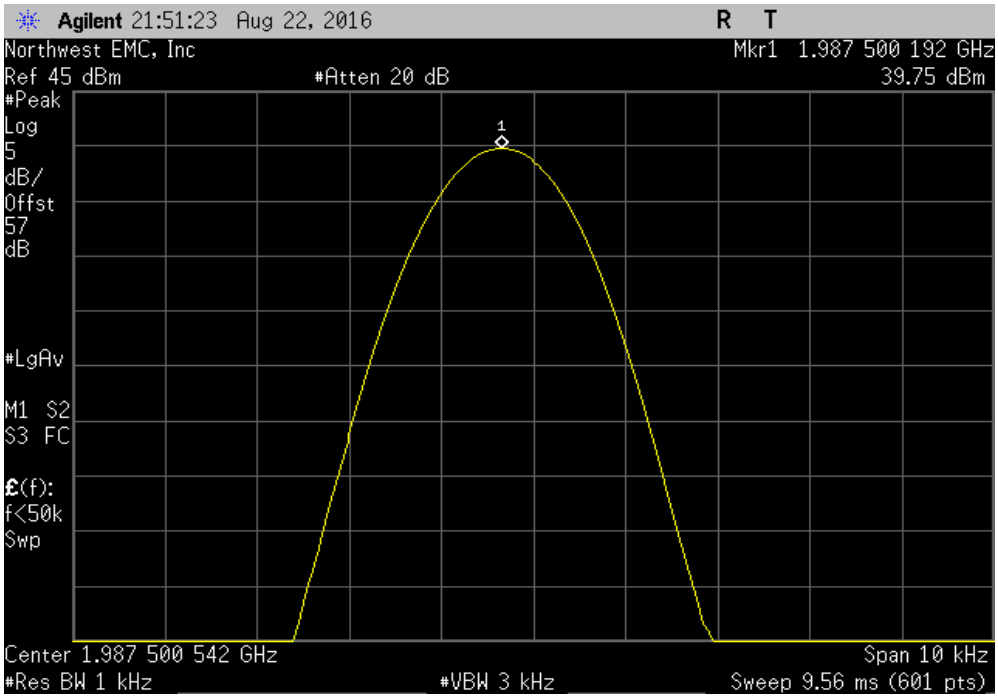
Port 2, Extreme Temperature, +50°C, Low Channel LTE5, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



Port 2, Extreme Temperature, +50°C, Mid Channel LTE5, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000169	1960	0.1	1	Pass



Port 2, Extreme Temperature, +50°C, High Channel LTE5, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



FREQUENCY STABILITY - WCDMA

XMit 2016.05.06

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.	Cal. Due
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPHS-32-3.5-SCT/AC	TBE	NCR	NCR
Thermometer	Omega Engineering, Inc.	HH311	DUC	10/3/2014	10/3/2017
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	4/16/2018
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/19/2015	11/19/2016

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model		Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43		NCR	NCR
Attenuator - 20dB	N/A	N/A		NCR	NCR
Power Divider	Fairview Microwave	MP8748-2		NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4		NCR	NCR
High Power Terminator	Telcon	KTMO400800060		NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spectrum analyzer is configured with a precision frequency reference that exceeds the stability requirement of the transmitter. The EUT was placed inside a temperature / humidity chamber.

Variation of Supply Voltage
The primary supply voltage was varied from 85% to 115% of the nominal voltage. A DC lab supply was used to vary the supply voltage.

Variation of Ambient Temperature
Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range.

FREQUENCY STABILITY - WCDMA

NORTHWEST EMC

XMit 2016.05.06

EUT:	CWS-3050-02			**Work Order:**	KMWC0076
Serial Number:	K163000003			**Date:**	09/22/16
Customer:	Parallel Wireless Inc.			**Temperature:**	22.4 °C
Attendees:	Andy Ku			**Humidity:**	50% RH
Project:	None			**Barometric Pres.:**	1015 mbar
Tested by:	Johnny Candelas	**Power:**	48VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 24E:2016	ANSI/TIA/EIA-603-D-2010

COMMENTS

Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.0dB total.

DEVIATIONS FROM TEST STANDARD

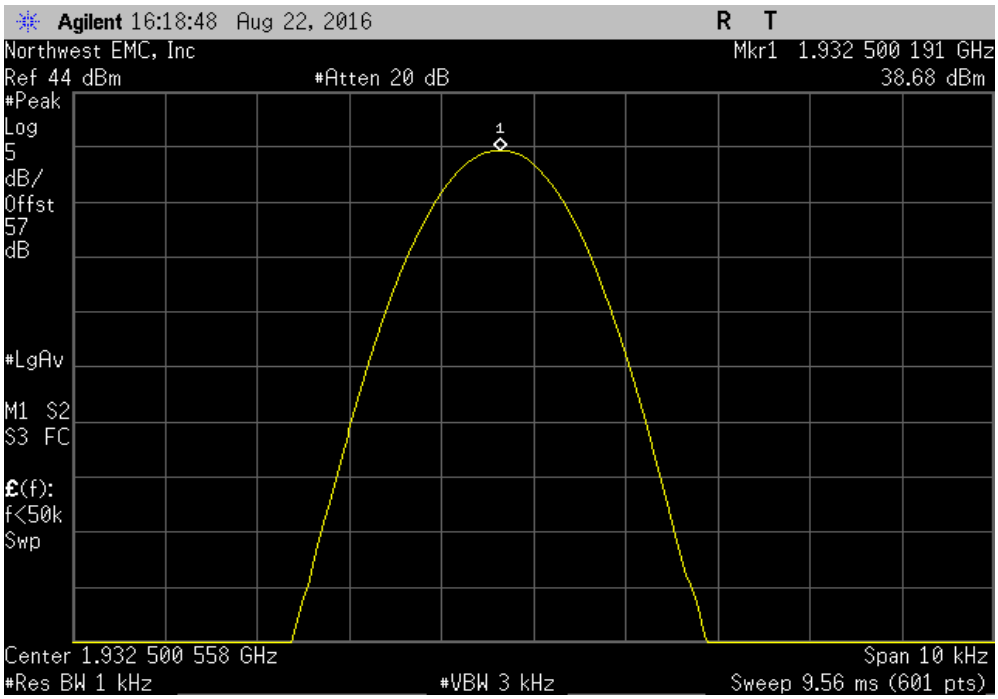
None

Configuration #	1	Signature

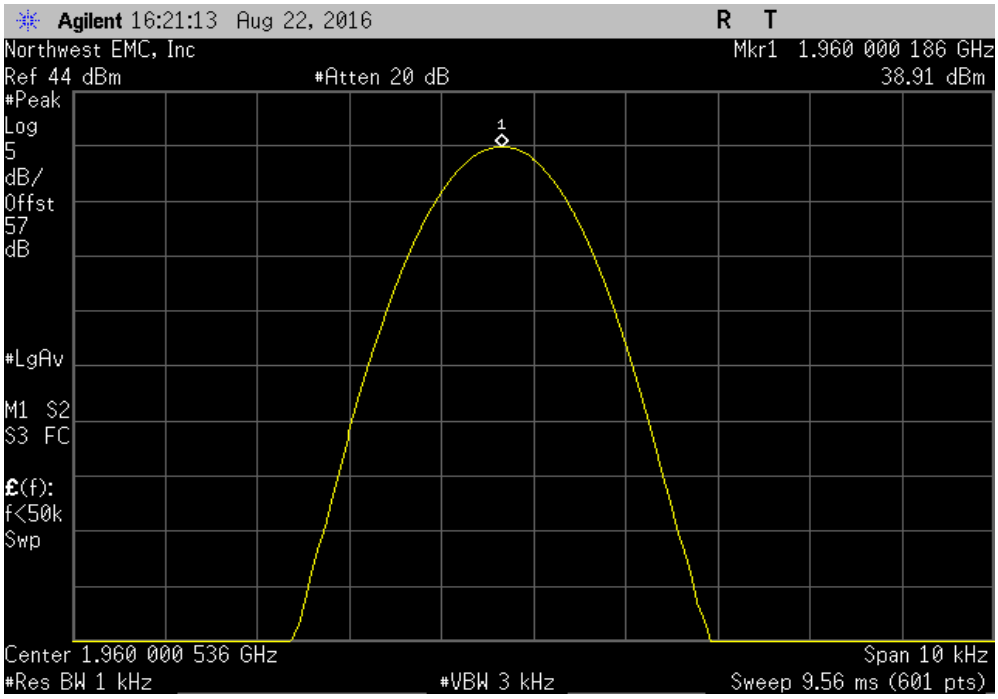
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
Port 1						
	Normal Temperature and Voltage					
	Low Channel CW, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Voltage, 55.2 VDC					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
	Extreme Voltage, 40.8 VAC					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -30°C					
	Low Channel CW, 1932.5 MHz	1932.500242	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -20°C					
	Low Channel CW, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.50018	1987.5	0.1	1	Pass
	Extreme Temperature, -10°C					
	Low Channel CW, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, 0°C					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
	Extreme Temperature, +10°C					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000169	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, +20°C					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, +30°C					
	Low Channel CW, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.499914	1987.5	0	1	Pass
	Extreme Temperature, +40°C					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.001519	1960	0.8	1	Pass
	High Channel CW, 1987.5 MHz	1987.500093	1987.5	0.1	1	Pass
	Extreme Temperature, +50°C					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Port 2						
	Normal Temperature and Voltage					
	Low Channel CW, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Voltage, 55.2 VDC					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
	Extreme Voltage, 40.8 VAC					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -30°C					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500493	1987.5	0.3	1	Pass
	Extreme Temperature, -20°C					
	Low Channel CW, 1932.5 MHz	1932.500808	1932.5	0.4	1	Pass
	Mid Channel CW, 1960 MHz	1960.000153	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
	Extreme Temperature, -10°C					
	Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
	Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
	High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass

Extreme Temperature, 0°C					
Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
Mid Channel CW, 1960 MHz	1960.000171	1960	0.1	1	Pass
High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Extreme Temperature, +10°C					
Low Channel CW, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel CW, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
Extreme Temperature, +20°C					
Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Extreme Temperature, +30°C					
Low Channel CW, 1932.5 MHz	1932.500171	1932.5	0.1	1	Pass
Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel CW, 1987.5 MHz	1987.500175	1987.5	0.1	1	Pass
Extreme Temperature, +40°C					
Low Channel CW, 1932.5 MHz	1932.500175	1932.5	0.1	1	Pass
Mid Channel CW, 1960 MHz	1960.000186	1960	0.1	1	Pass
High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass
Extreme Temperature, +50°C					
Low Channel CW, 1932.5 MHz	1932.500191	1932.5	0.1	1	Pass
Mid Channel CW, 1960 MHz	1960.000169	1960	0.1	1	Pass
High Channel CW, 1987.5 MHz	1987.500192	1987.5	0.1	1	Pass

Port 1, Normal Temperature and Voltage, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



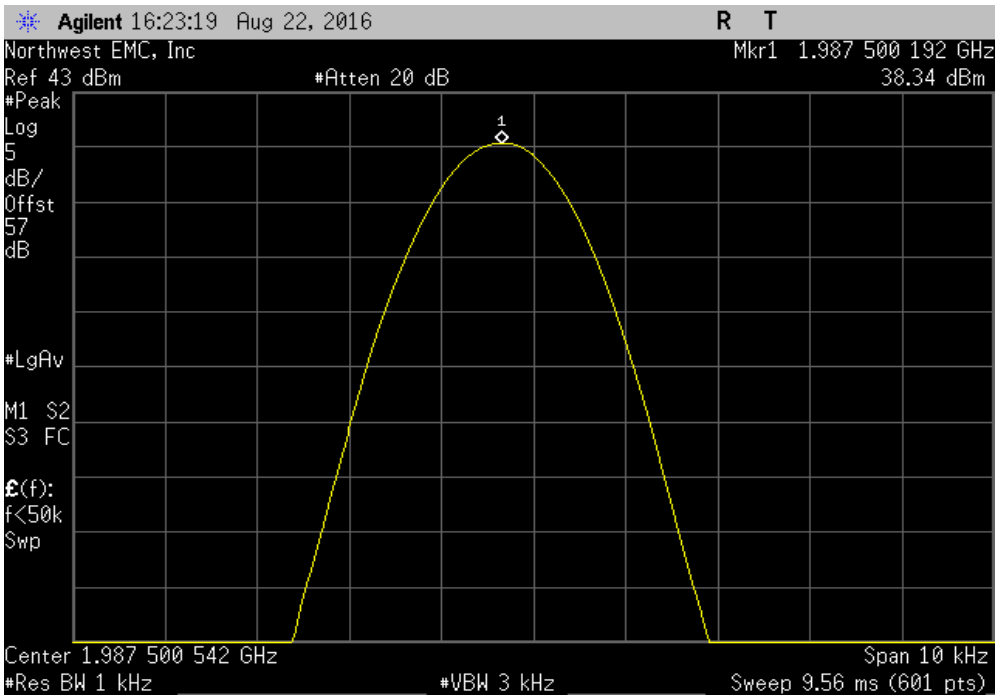
Port 1, Normal Temperature and Voltage, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



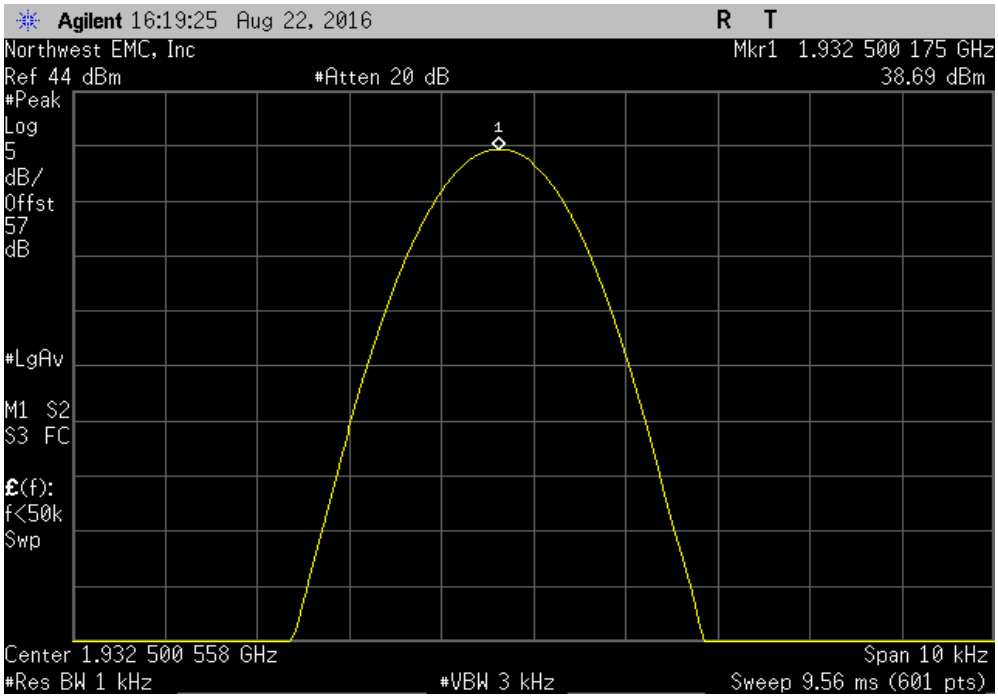
FREQUENCY STABILITY - WCDMA

XMit 2016.05.06

Port 1, Normal Temperature and Voltage, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 1, Extreme Voltage, 55.2 VDC, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass

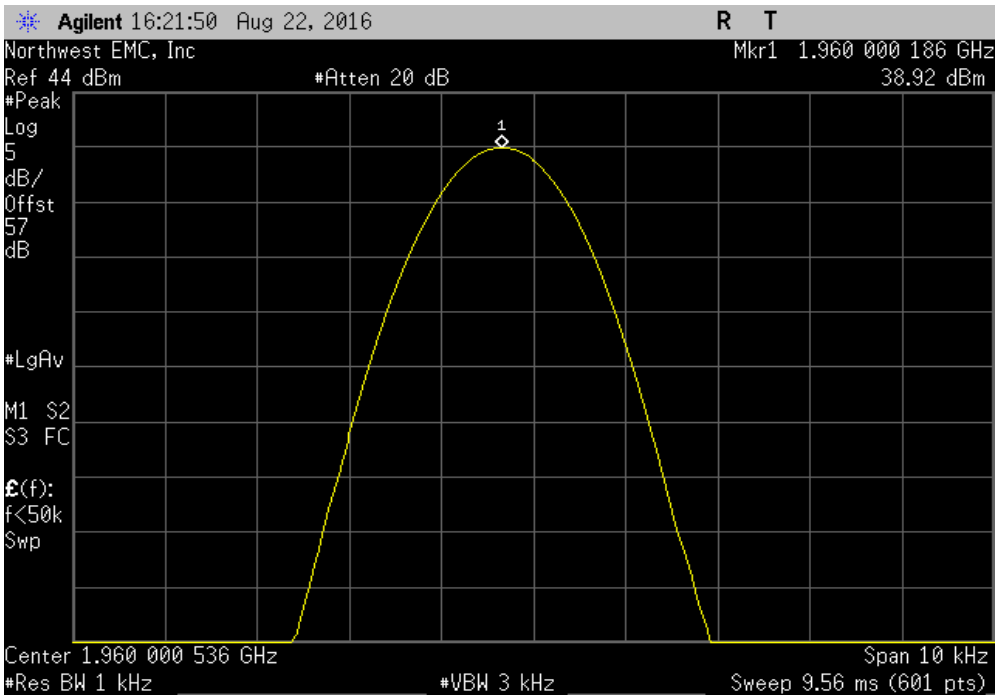


FREQUENCY STABILITY - WCDMA

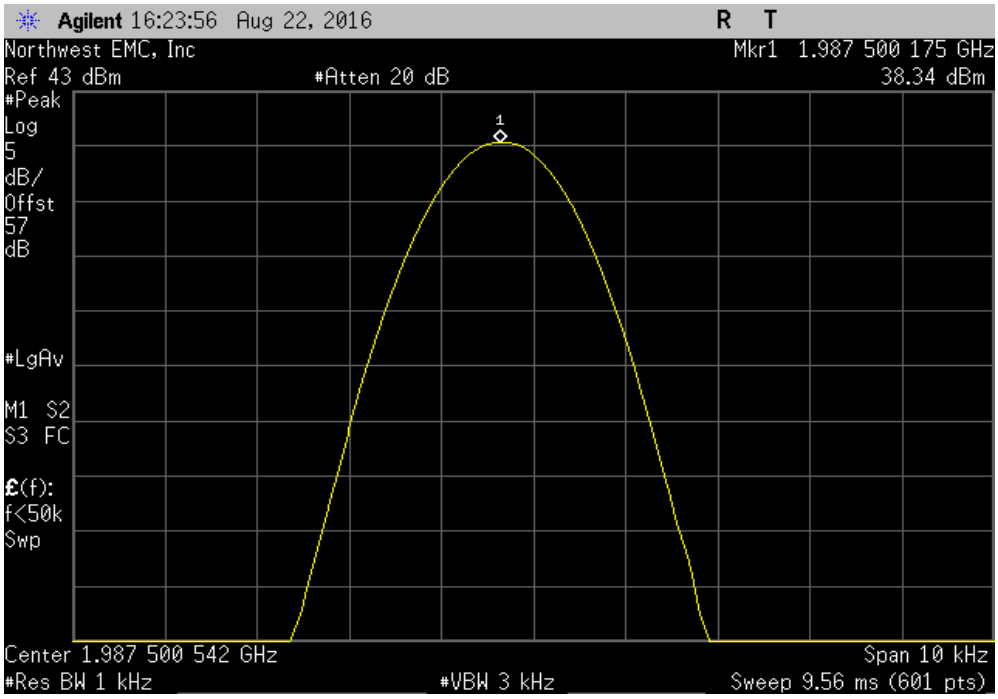
NORTHWEST EMC

XMit 2016.05.06

Port 1, Extreme Voltage, 55.2 VDC, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



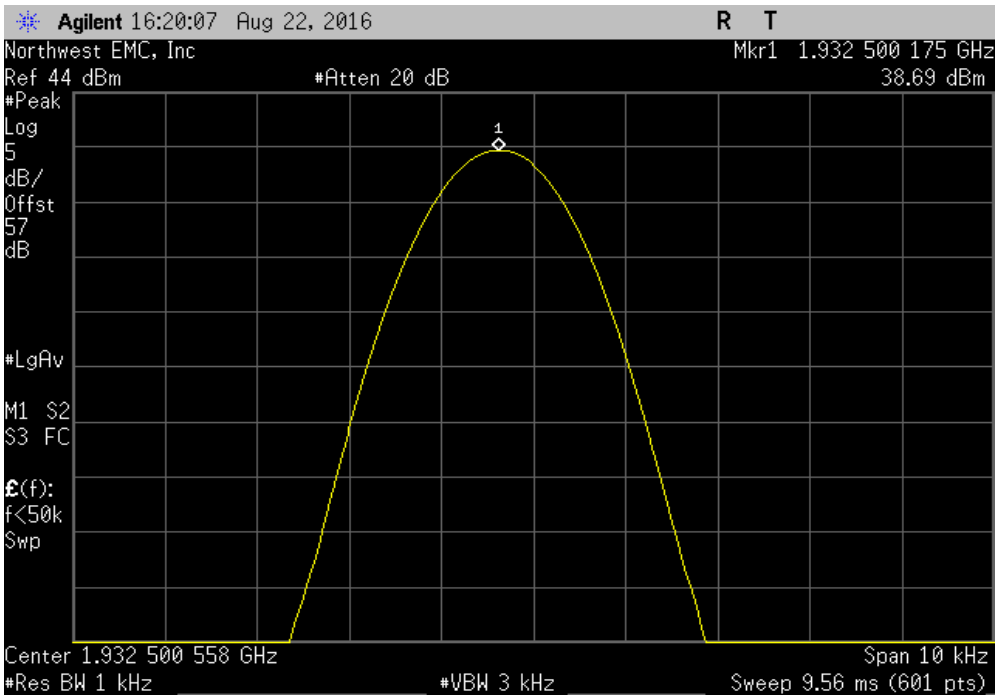
Port 1, Extreme Voltage, 55.2 VDC, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass



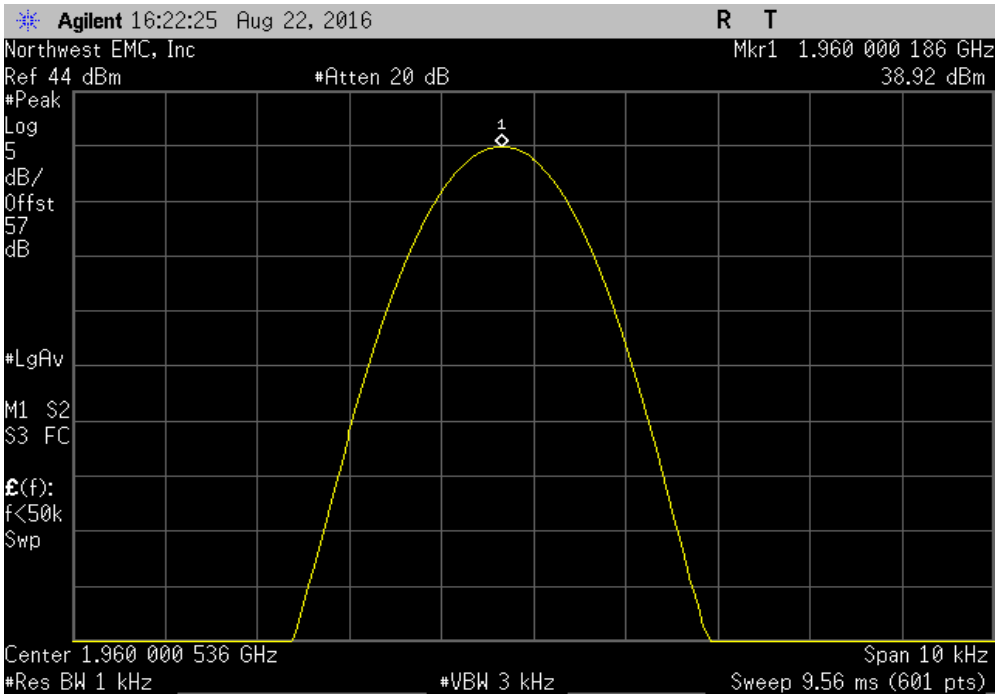
FREQUENCY STABILITY - WCDMA

XMit 2016.05.06

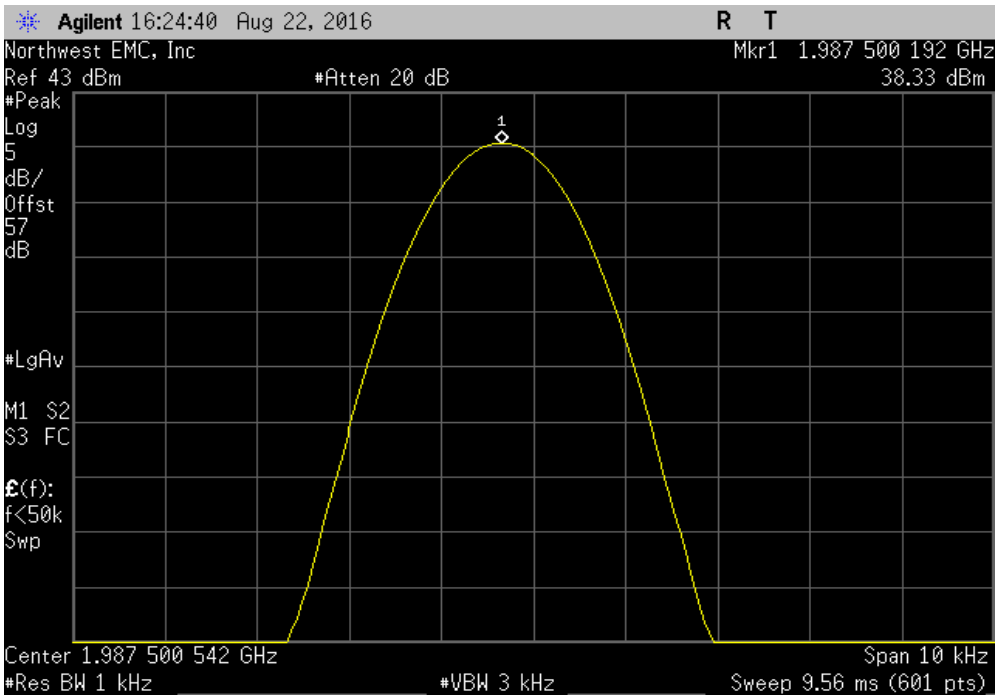
Port 1, Extreme Voltage, 40.8 VAC, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



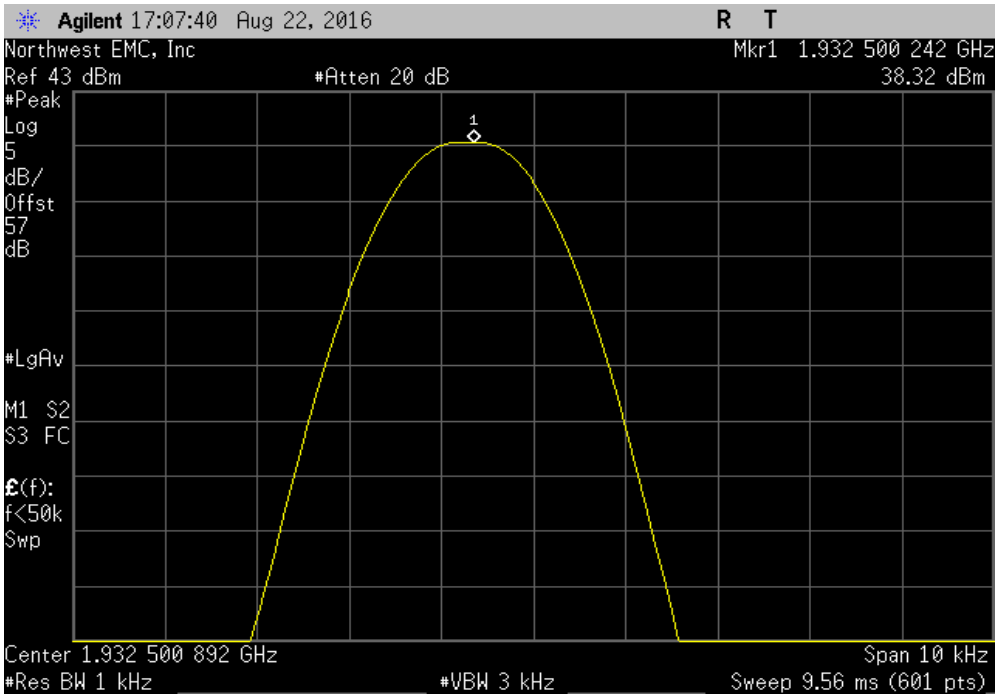
Port 1, Extreme Voltage, 40.8 VAC, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 1, Extreme Voltage, 40.8 VAC, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 1, Extreme Temperature, -30°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500242	1932.5	0.1	1	Pass

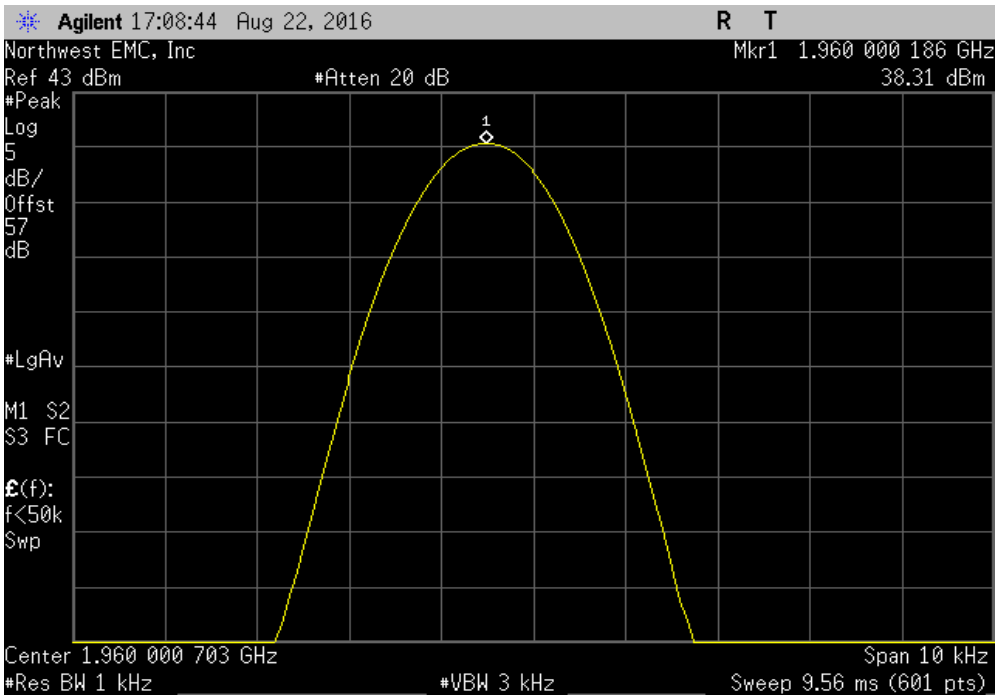


FREQUENCY STABILITY - WCDMA

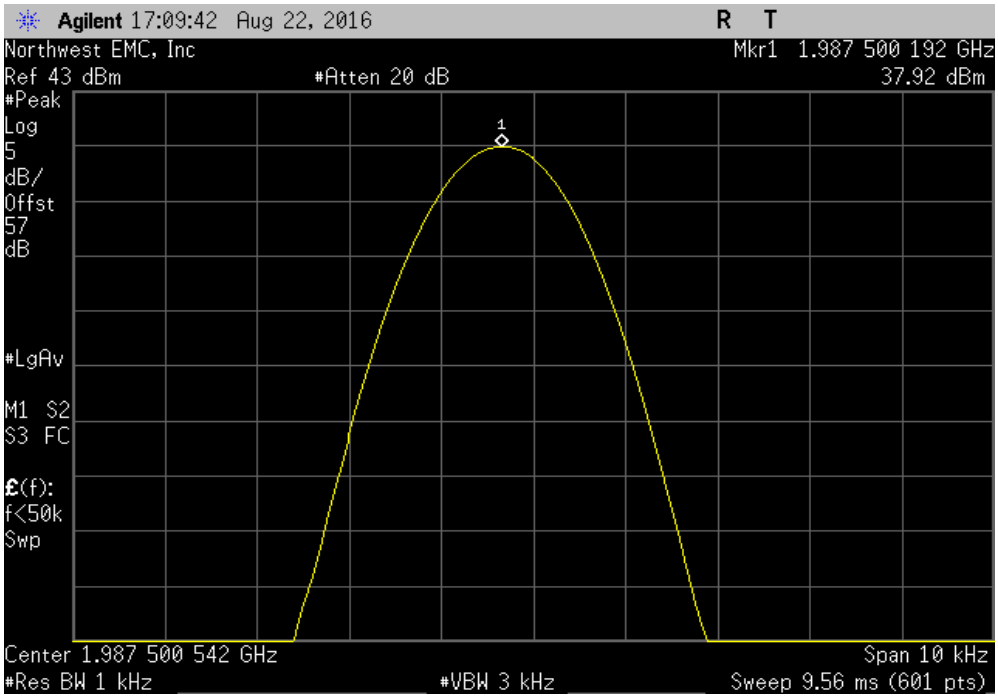
NORTHWEST EMC

XMit 2016.05.06

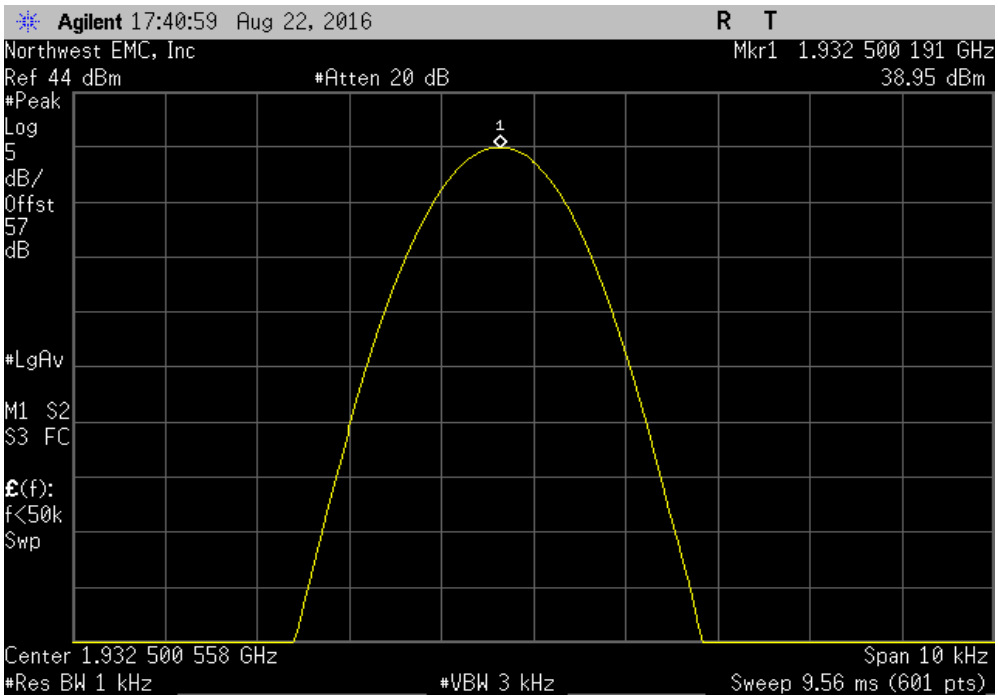
Port 1, Extreme Temperature, -30°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



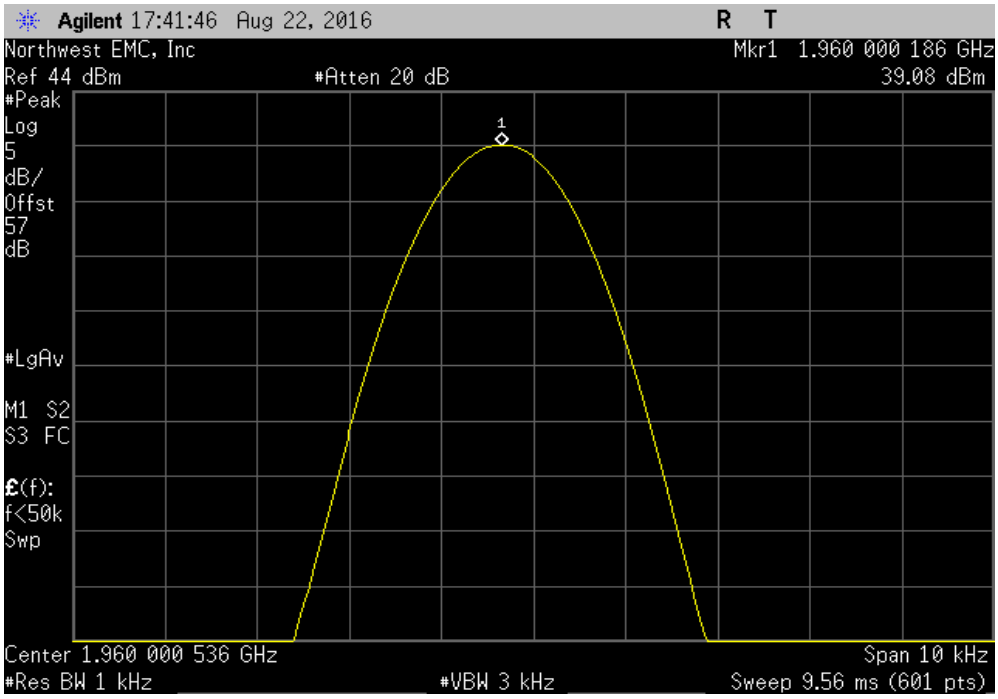
Port 1, Extreme Temperature, -30°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



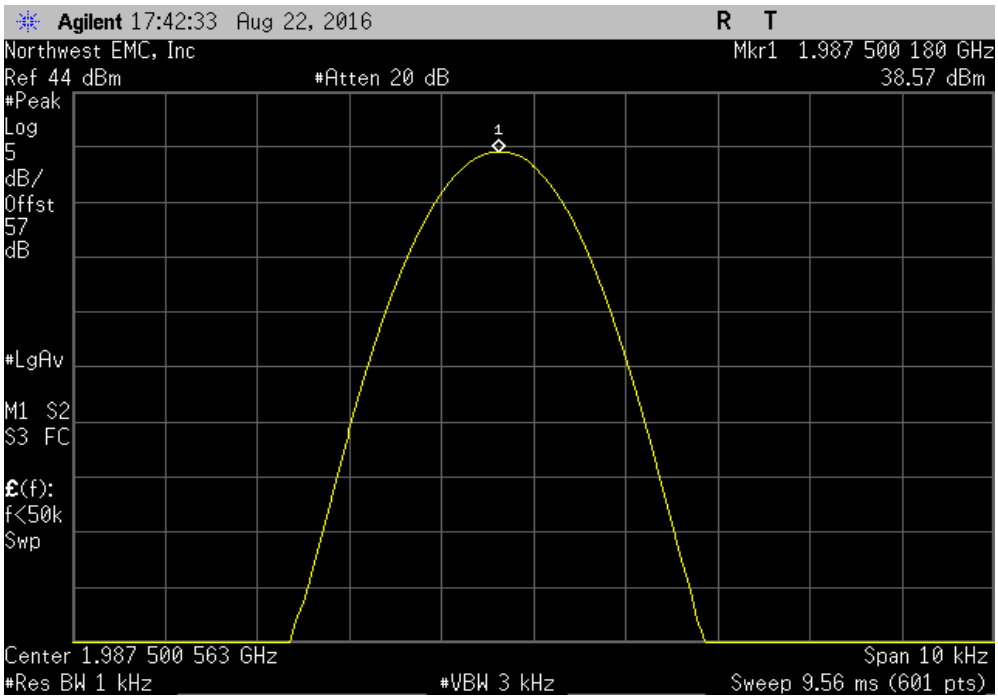
Port 1, Extreme Temperature, -20°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



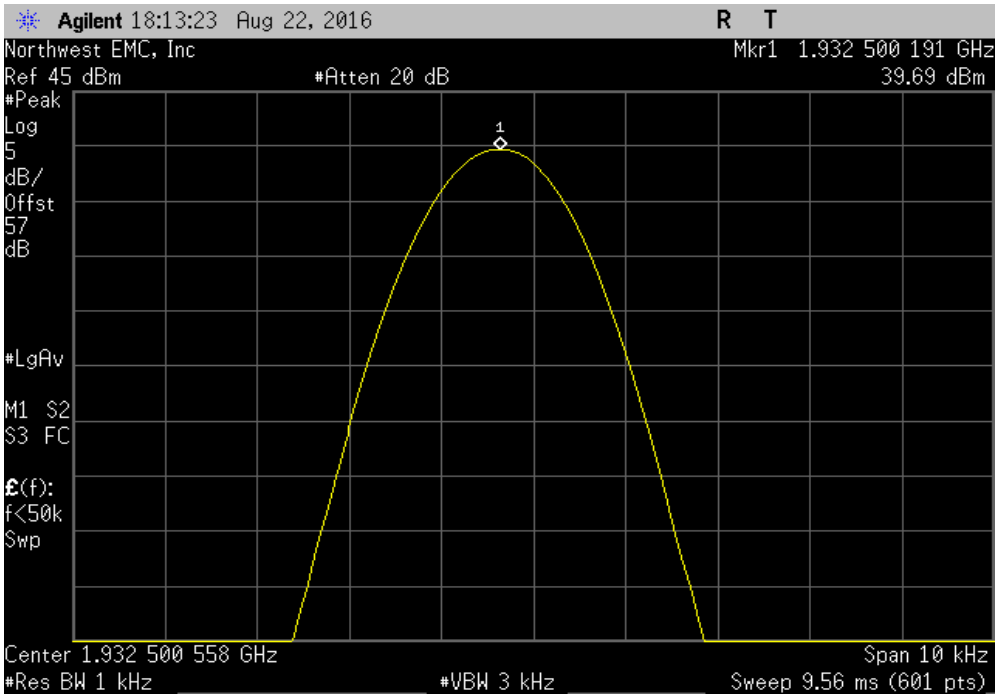
Port 1, Extreme Temperature, -20°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



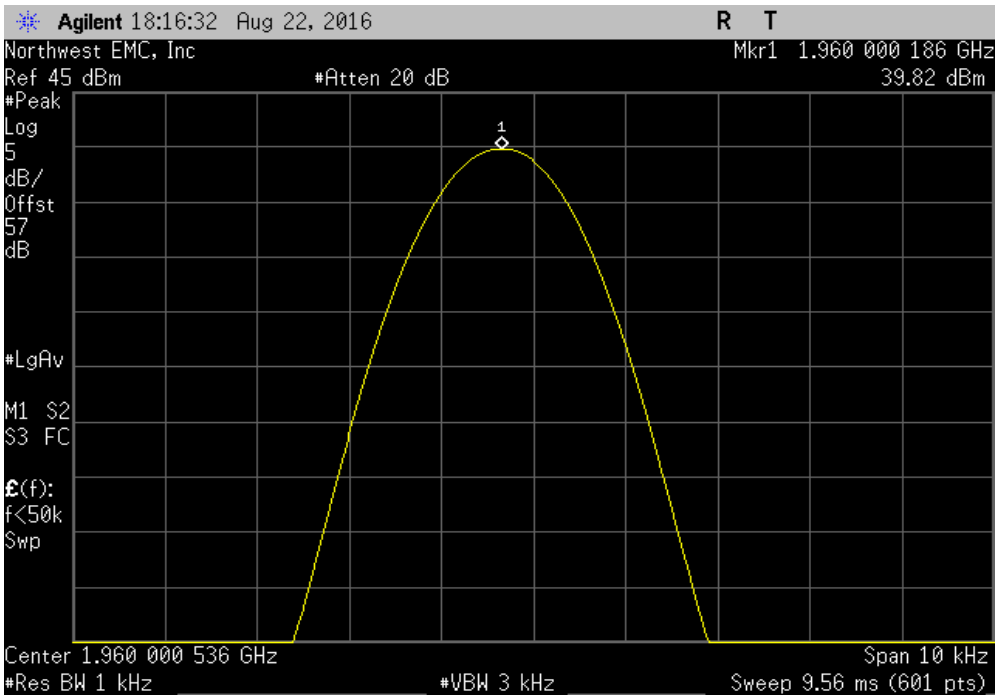
Port 1, Extreme Temperature, -20°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.50018	1987.5	0.1	1	Pass



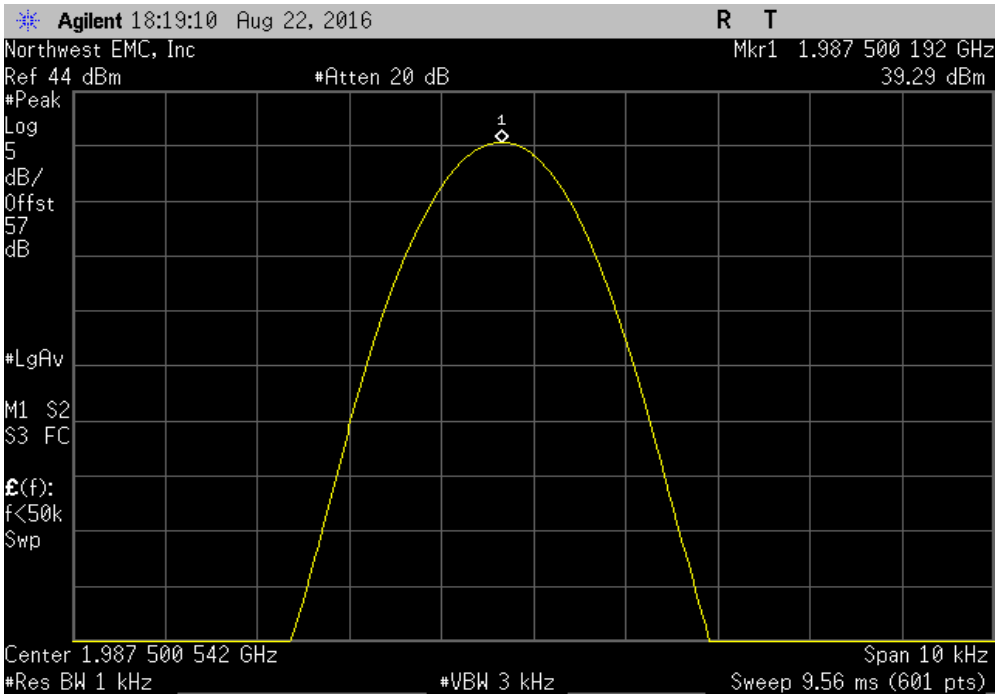
Port 1, Extreme Temperature, -10°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



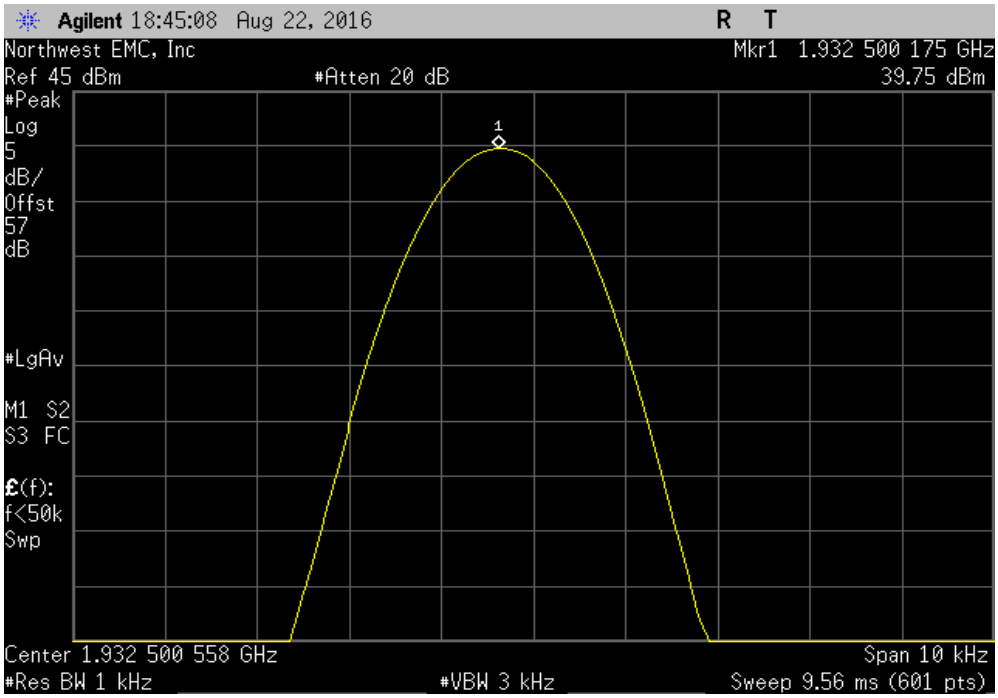
Port 1, Extreme Temperature, -10°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



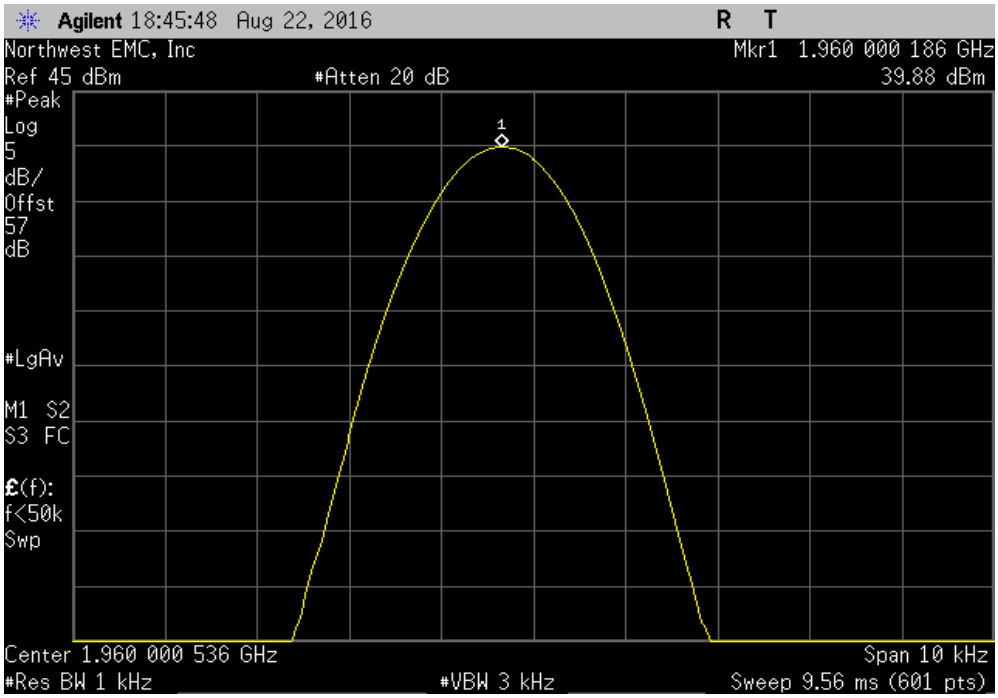
Port 1, Extreme Temperature, -10°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



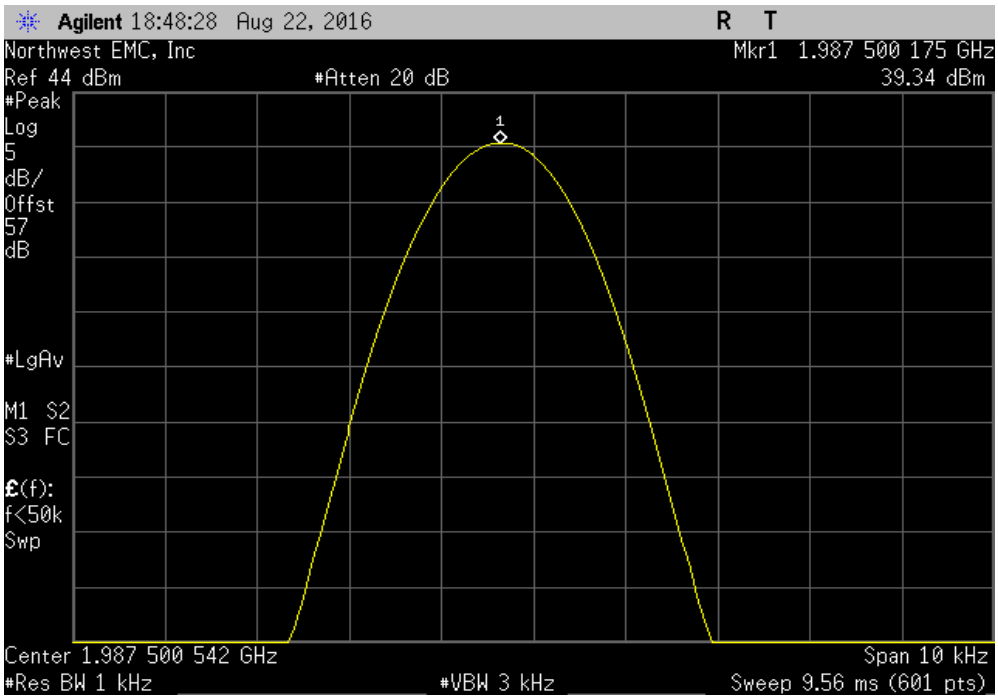
Port 1, Extreme Temperature, 0°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



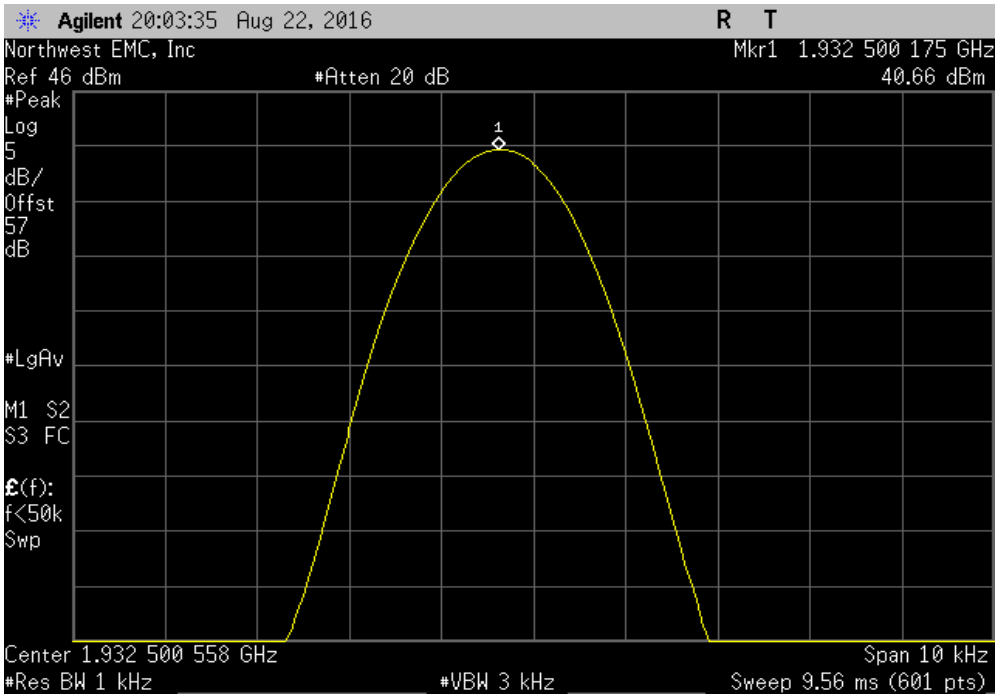
Port 1, Extreme Temperature, 0°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 1, Extreme Temperature, 0°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass



Port 1, Extreme Temperature, +10°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass

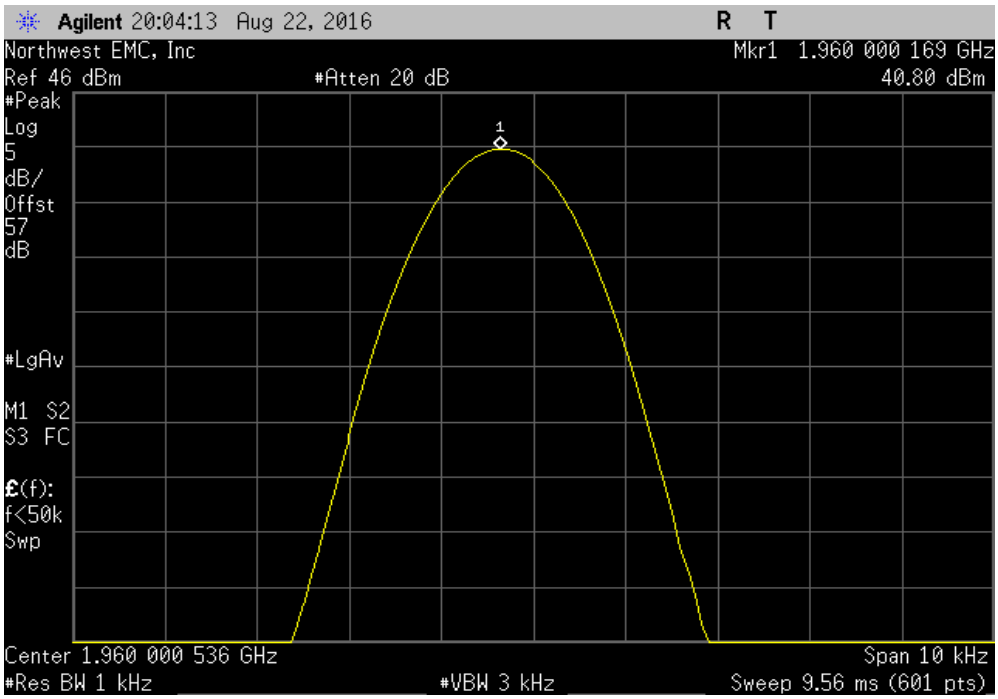


FREQUENCY STABILITY - WCDMA

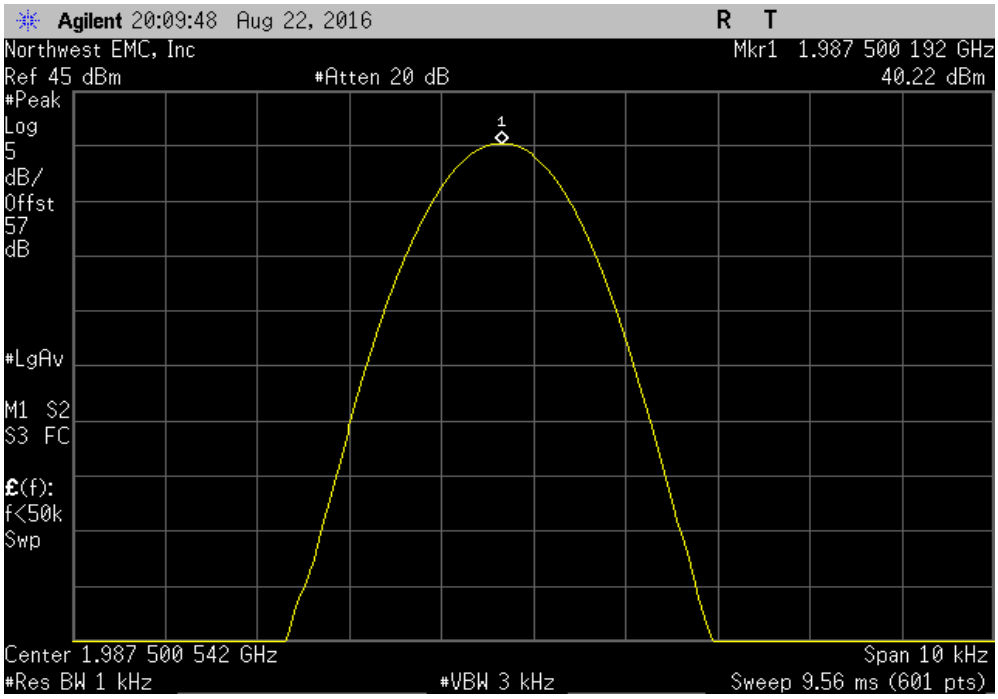
NORTHWEST EMC

XMit 2016.05.06

Port 1, Extreme Temperature, +10°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000169	1960	0.1	1	Pass



Port 1, Extreme Temperature, +10°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass

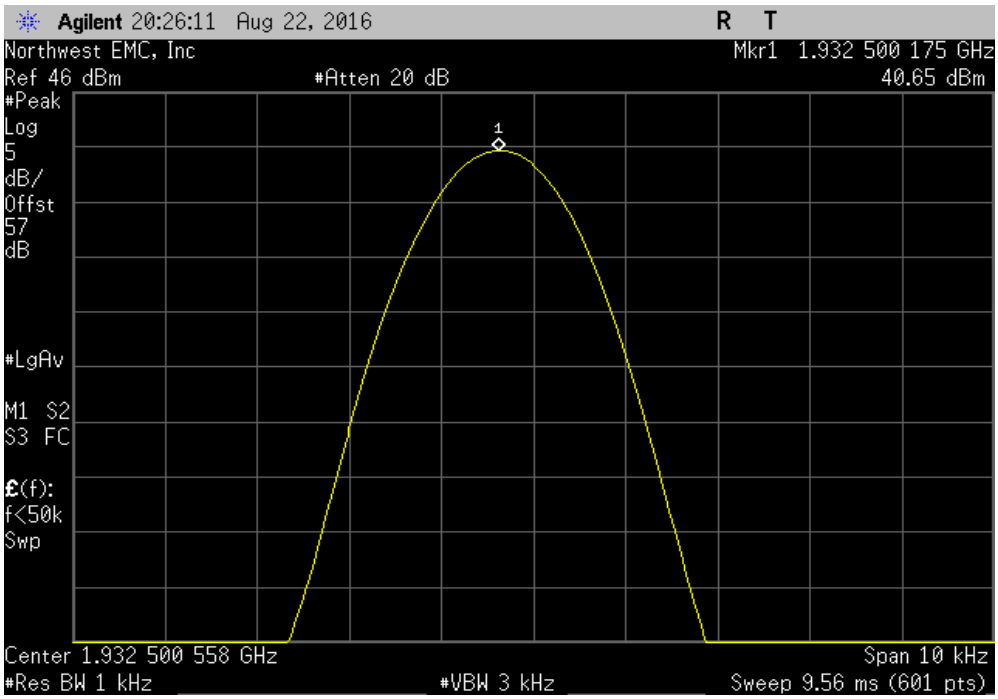


FREQUENCY STABILITY - WCDMA

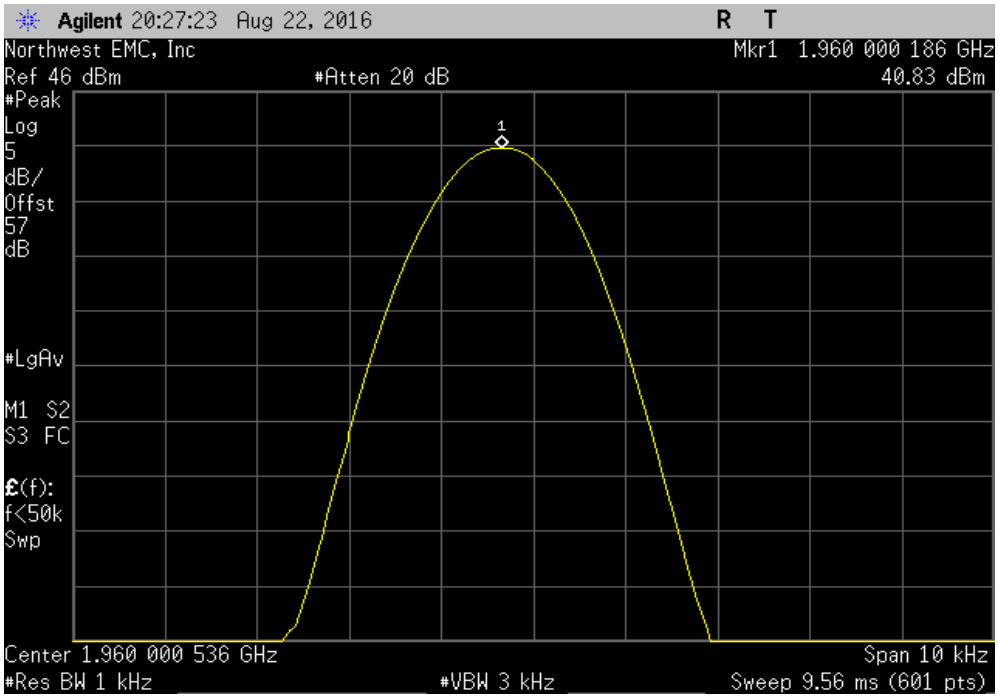
NORTHWEST EMC

XMit 2016.05.06

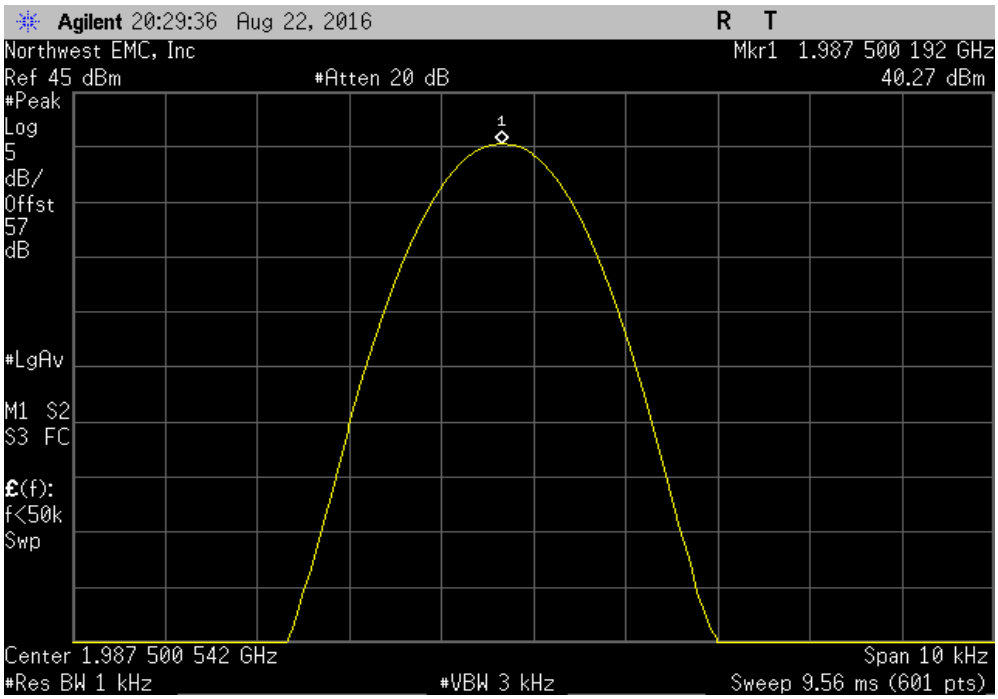
Port 1, Extreme Temperature, +20°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



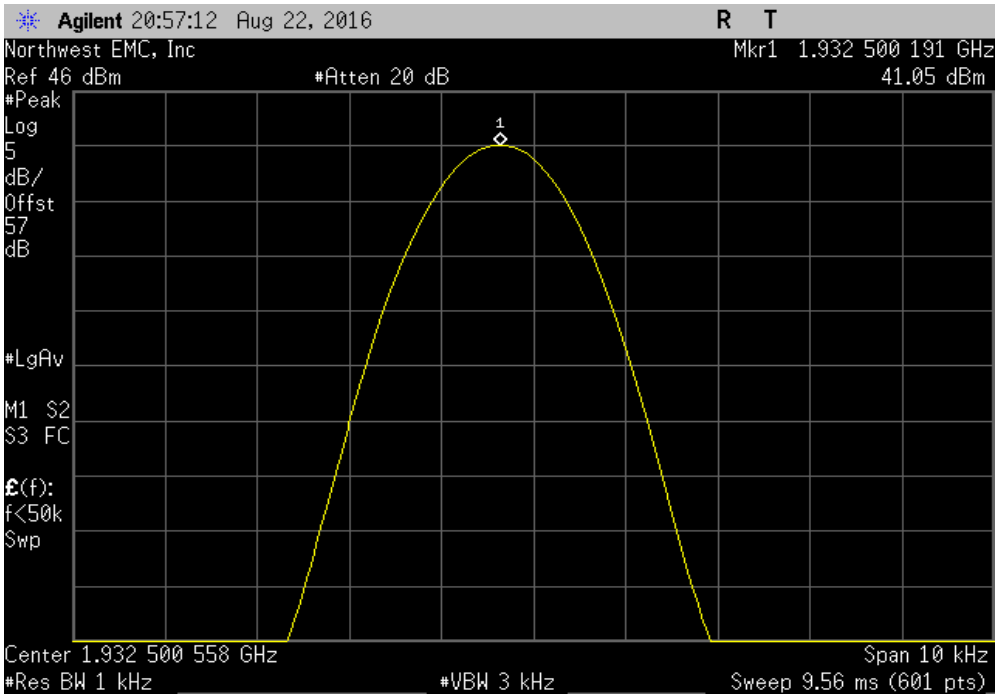
Port 1, Extreme Temperature, +20°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 1, Extreme Temperature, +20°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 1, Extreme Temperature, +30°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass

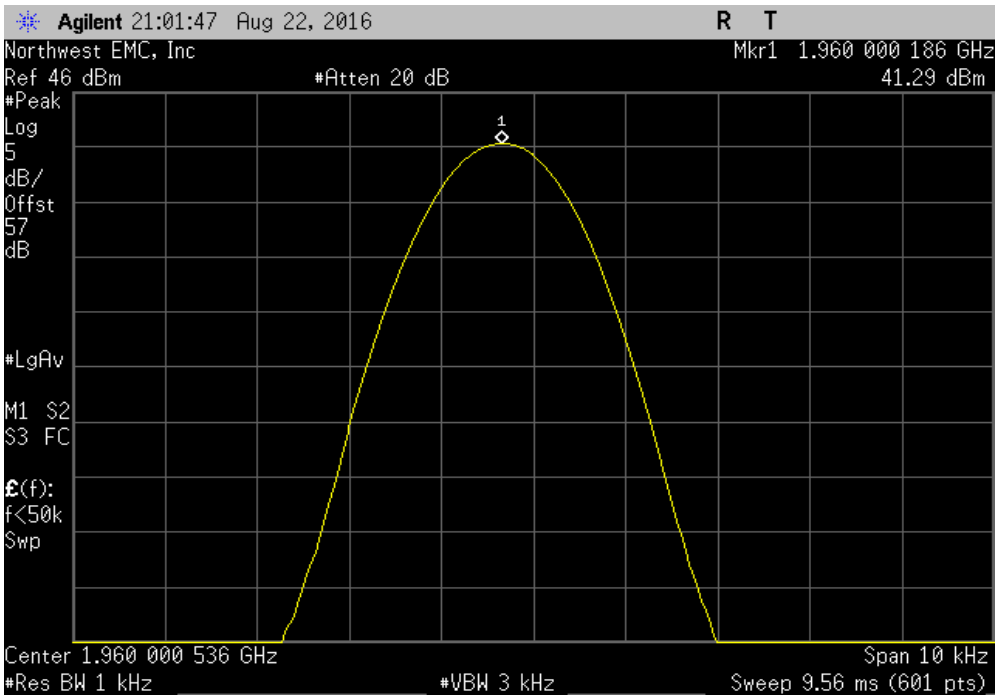


FREQUENCY STABILITY - WCDMA

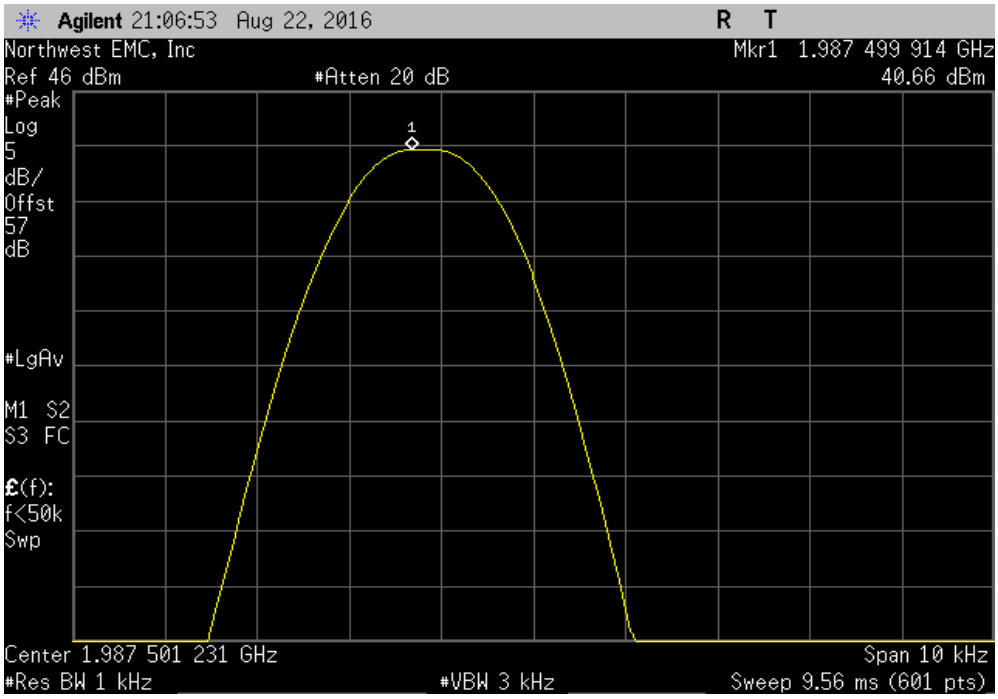
NORTHWEST EMC

XMit 2016.05.06

Port 1, Extreme Temperature, +30°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 1, Extreme Temperature, +30°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.499914	1987.5	0	1	Pass

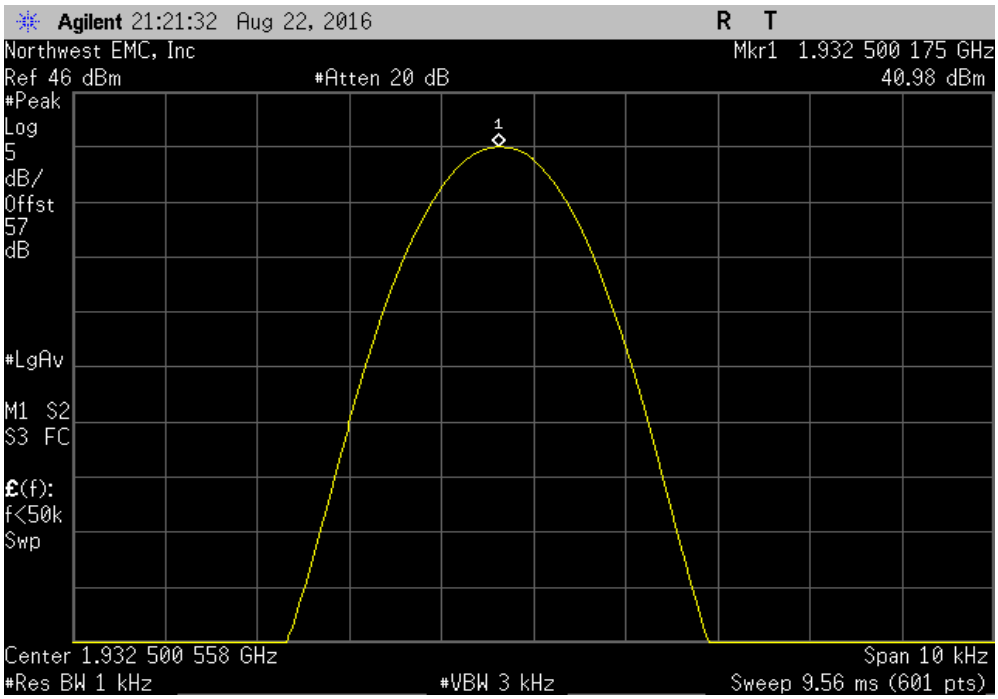


FREQUENCY STABILITY - WCDMA

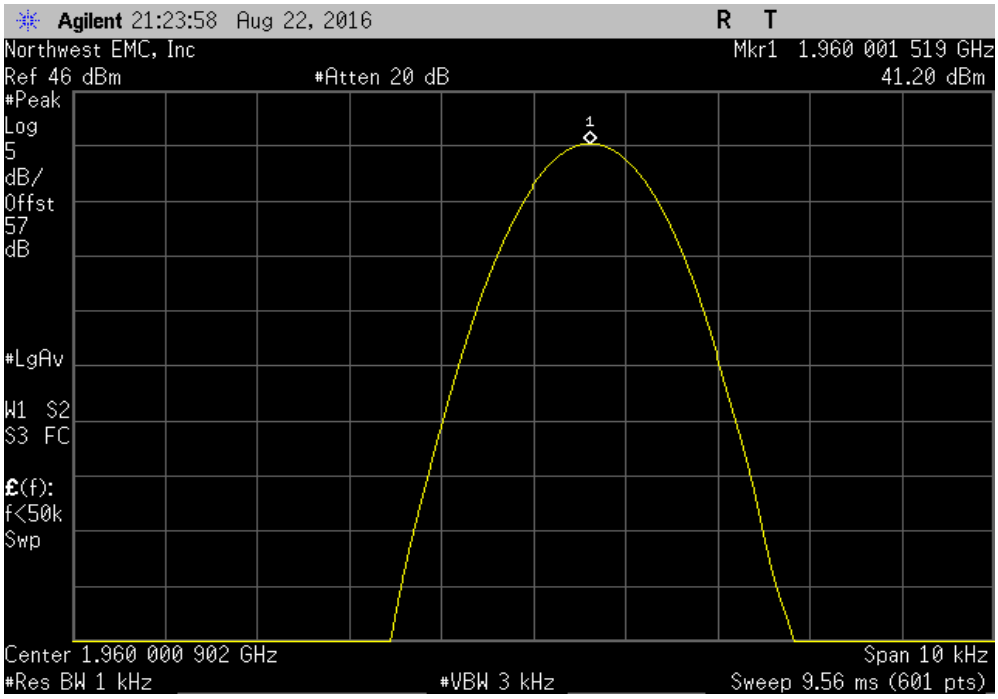
NORTHWEST EMC

XMit 2016.05.06

Port 1, Extreme Temperature, +40°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



Port 1, Extreme Temperature, +40°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.001519	1960	0.8	1	Pass

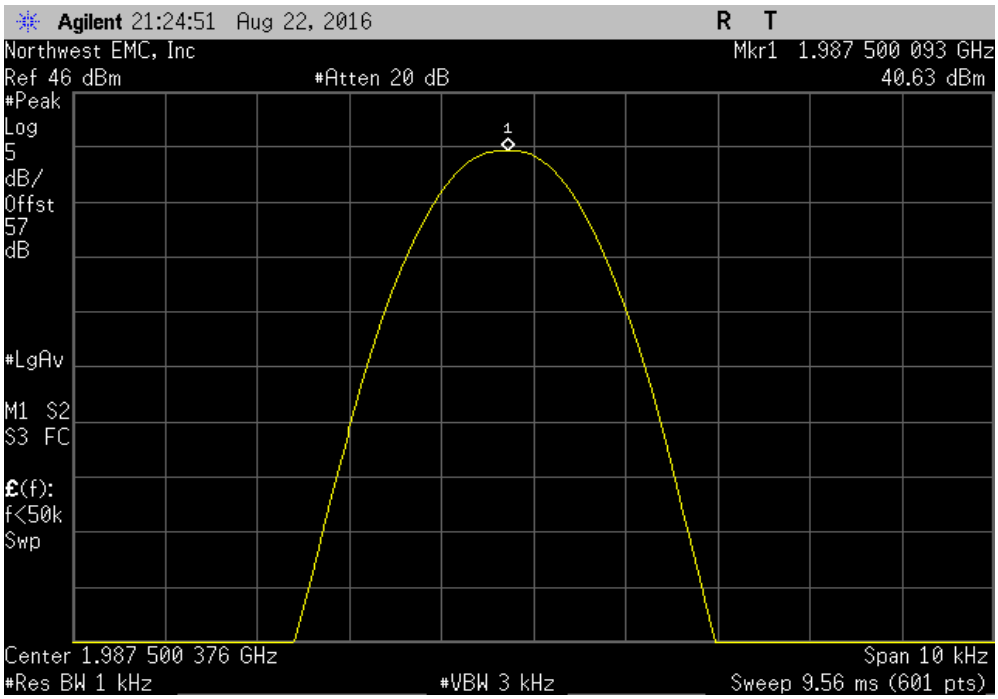


FREQUENCY STABILITY - WCDMA

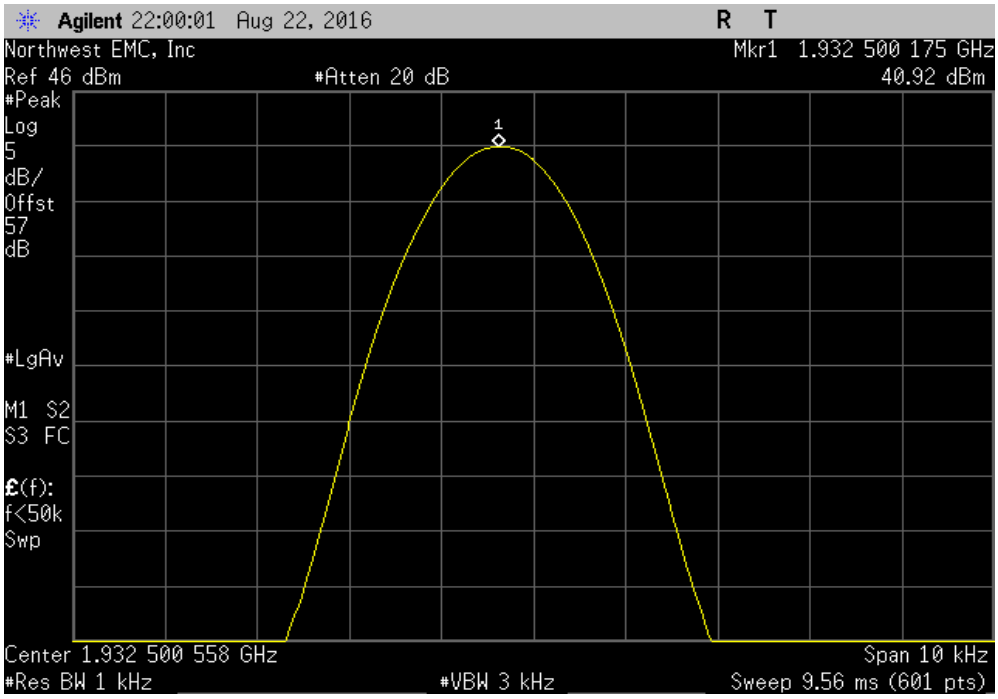
NORTHWEST EMC

XMit 2016.05.06

Port 1, Extreme Temperature, +40°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500093	1987.5	0.1	1	Pass



Port 1, Extreme Temperature, +50°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass

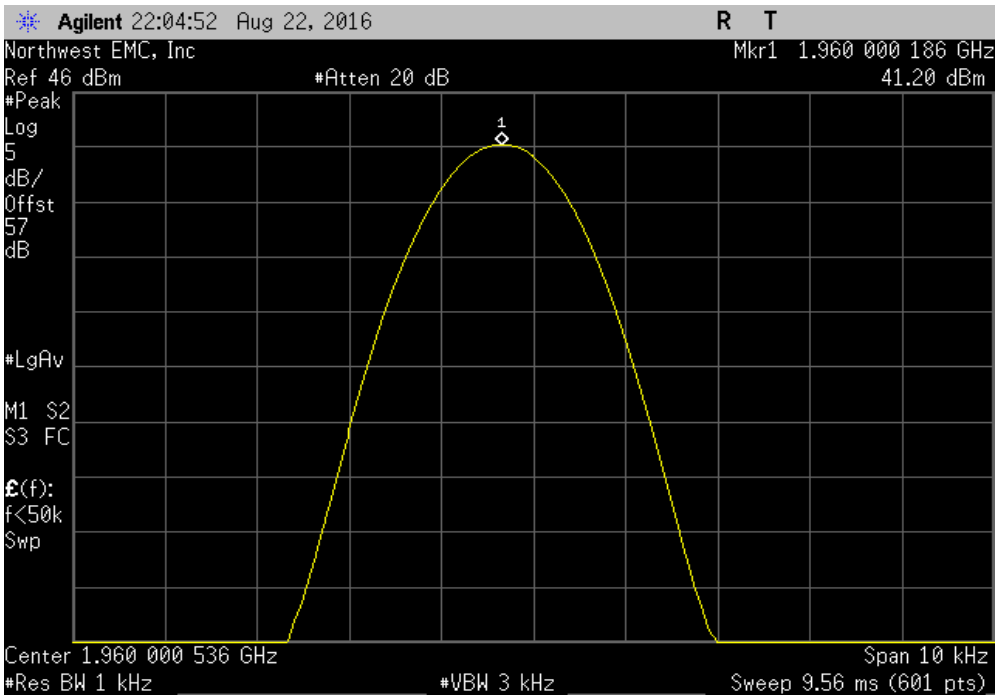


FREQUENCY STABILITY - WCDMA

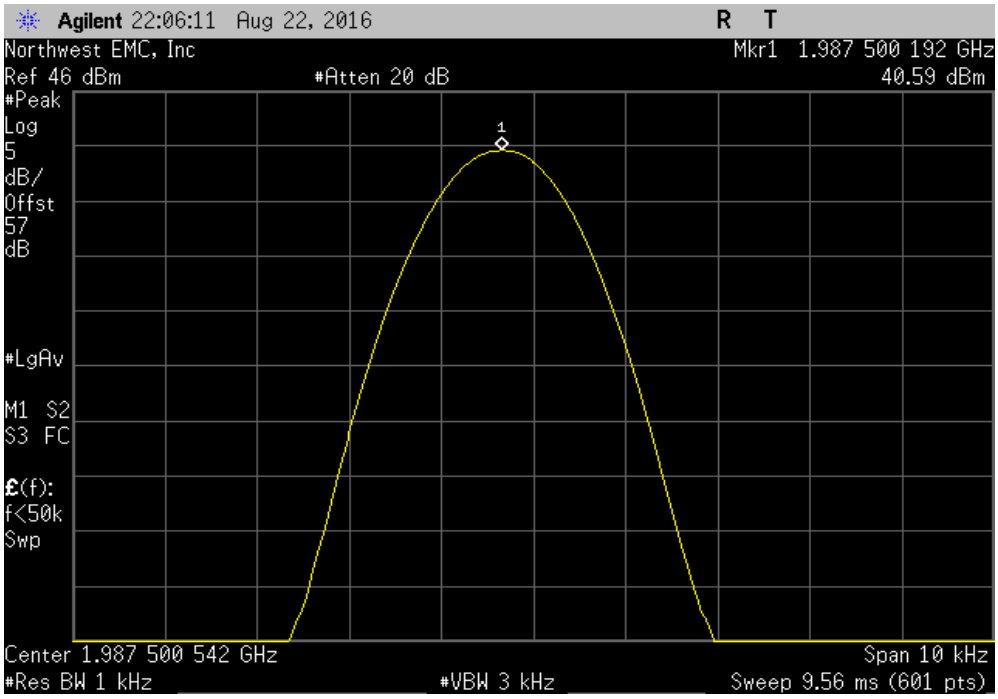
NORTHWEST EMC

XMit 2016.05.06

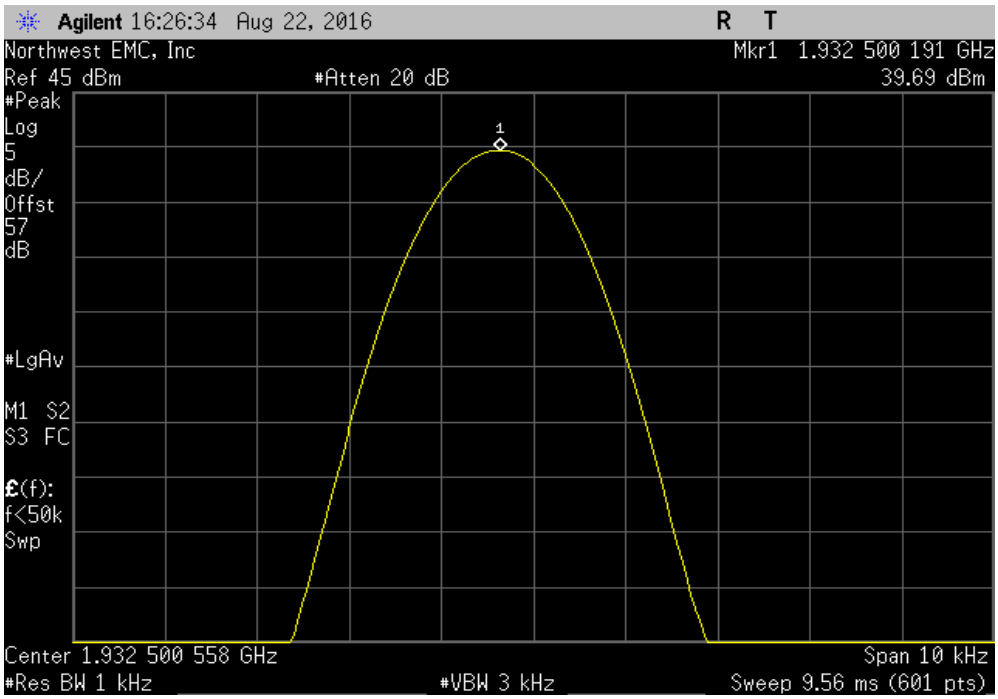
Port 1, Extreme Temperature, +50°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



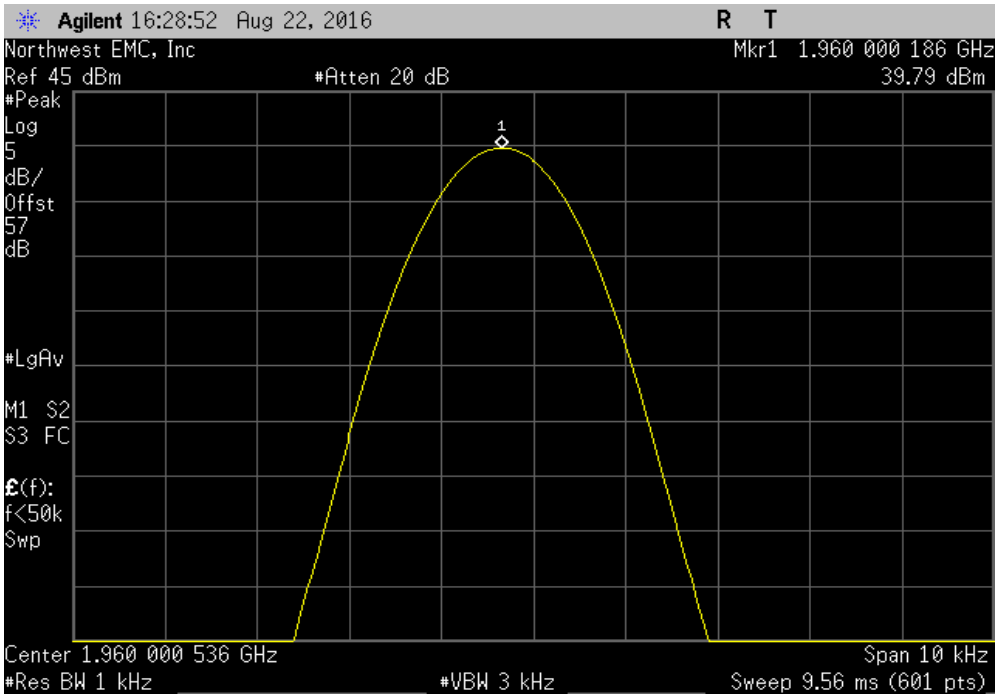
Port 1, Extreme Temperature, +50°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 2, Normal Temperature and Voltage, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass



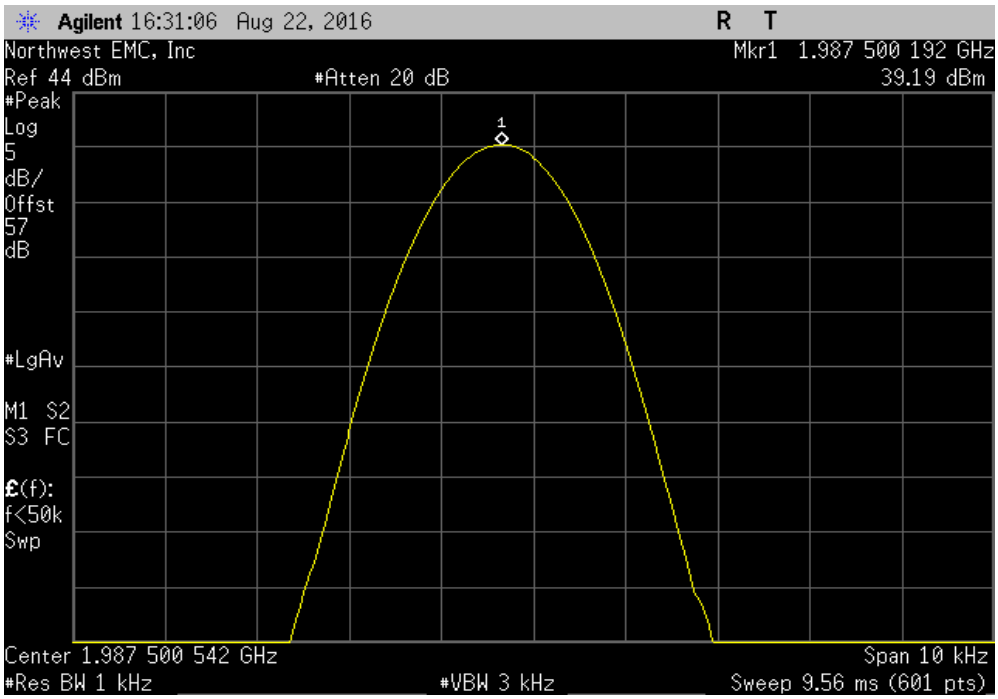
Port 2, Normal Temperature and Voltage, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



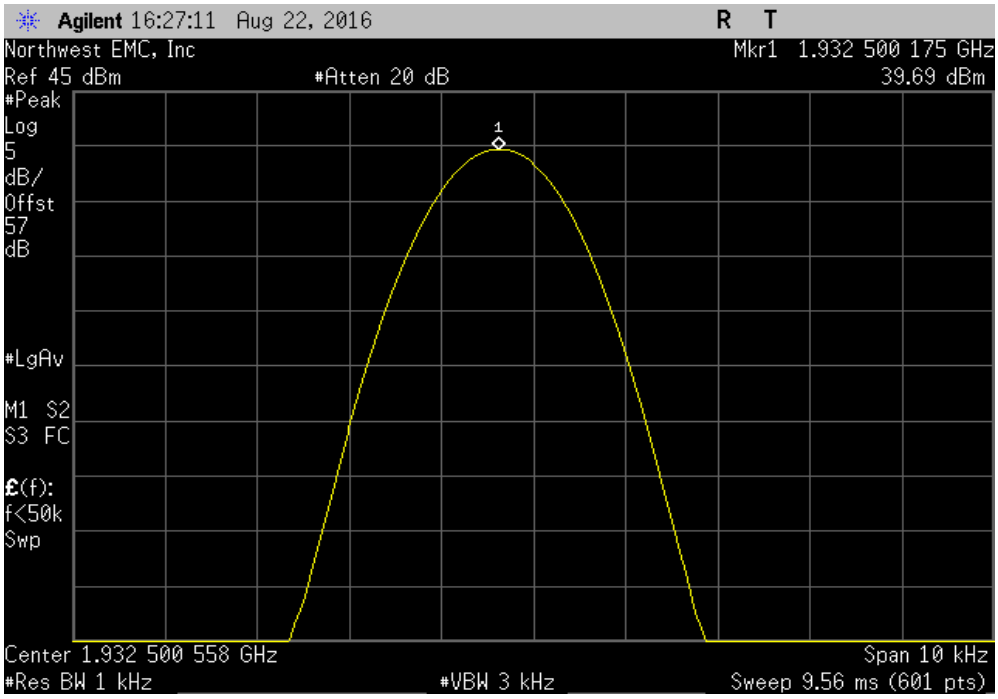
FREQUENCY STABILITY - WCDMA

XMit 2016.05.06

Port 2, Normal Temperature and Voltage, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



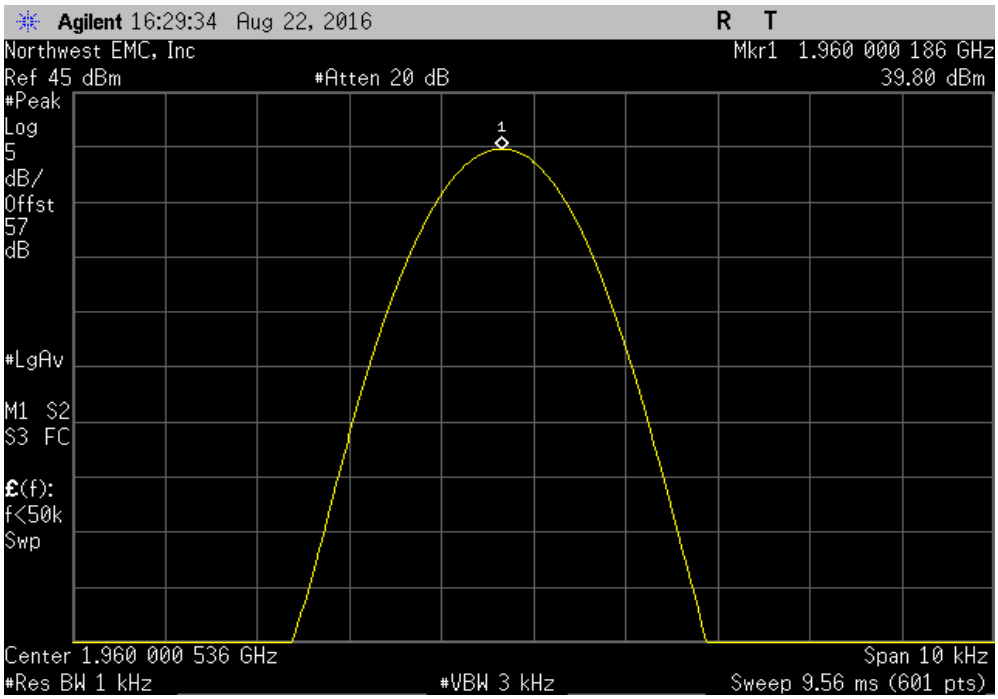
Port 2, Extreme Voltage, 55.2 VDC, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



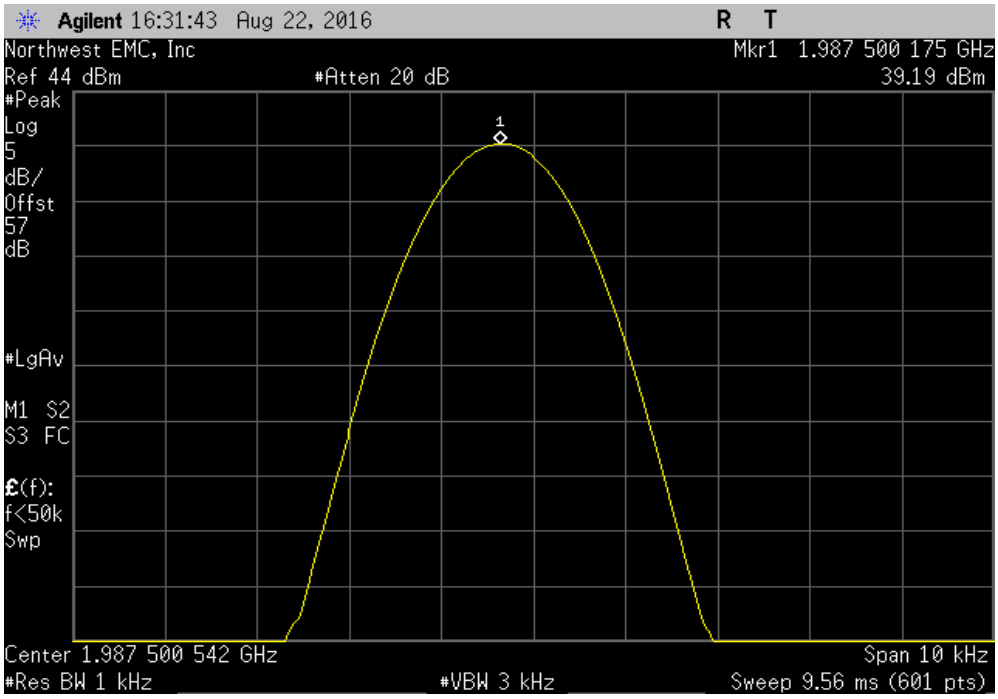
FREQUENCY STABILITY - WCDMA

XMit 2016.05.06

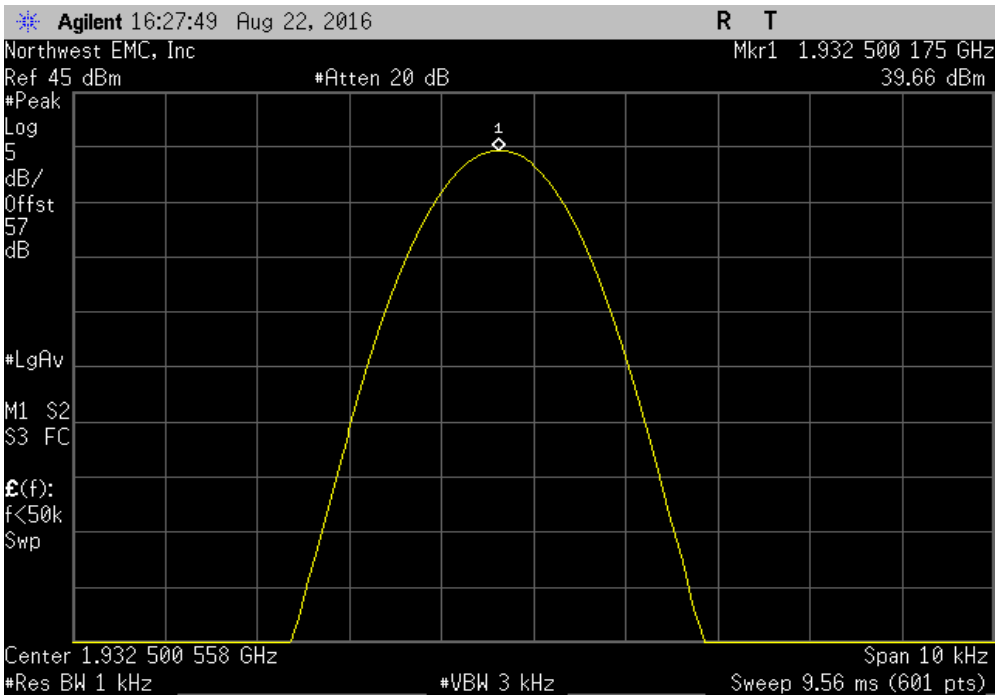
Port 2, Extreme Voltage, 55.2 VDC, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



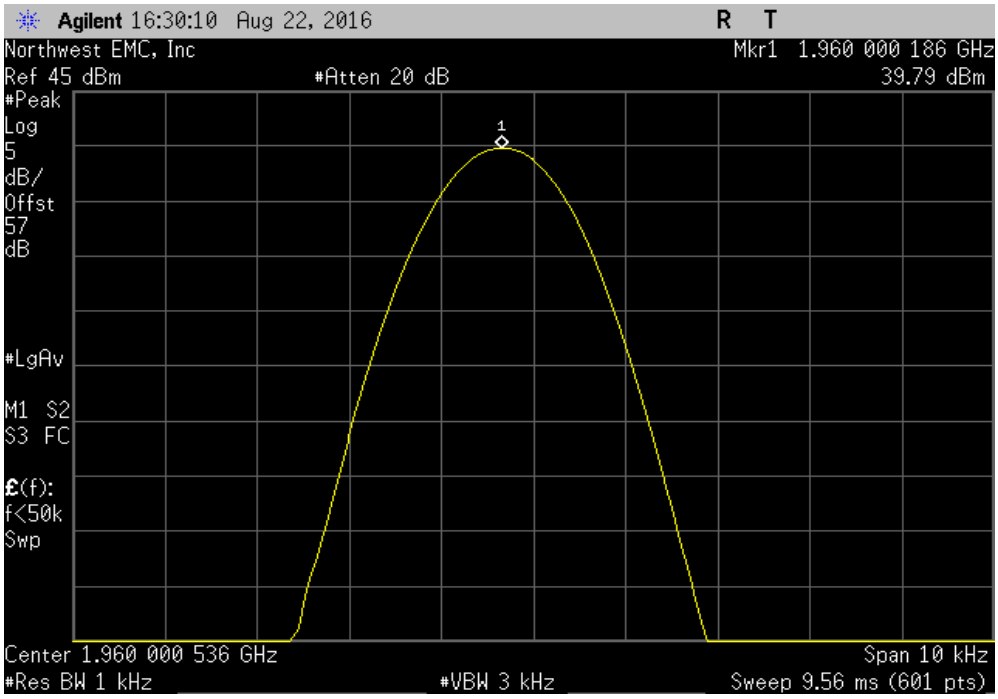
Port 2, Extreme Voltage, 55.2 VDC, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass



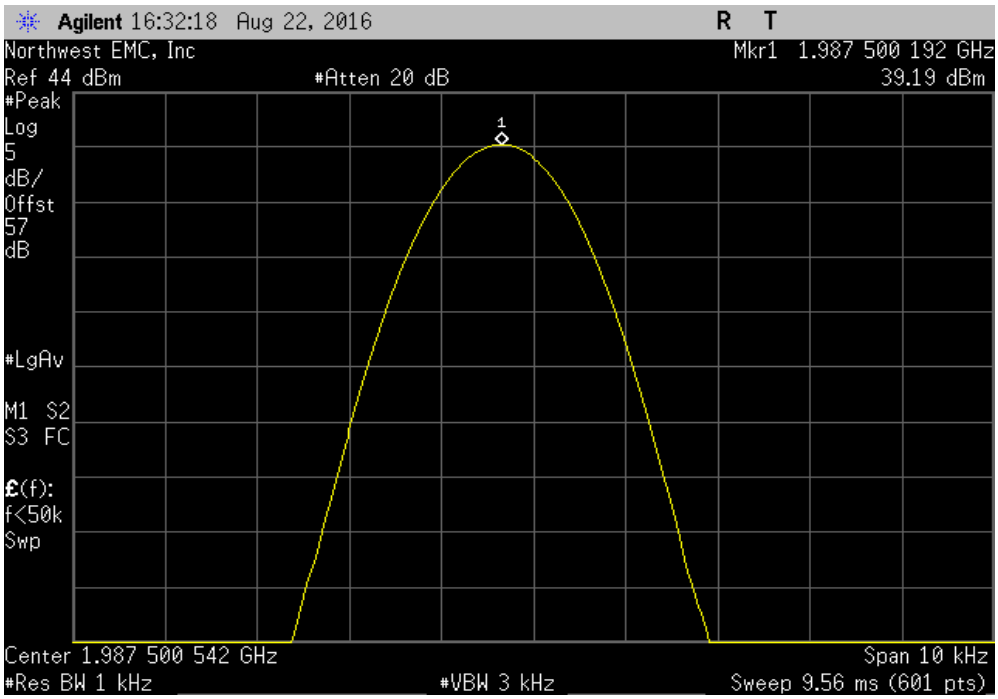
Port 2, Extreme Voltage, 40.8 VAC, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



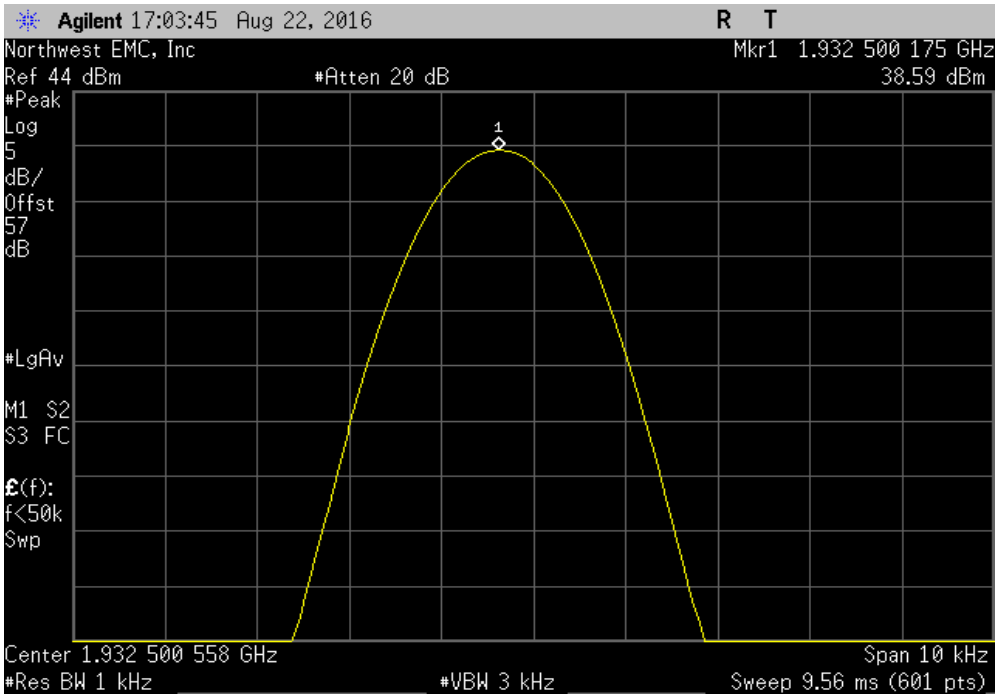
Port 2, Extreme Voltage, 40.8 VAC, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



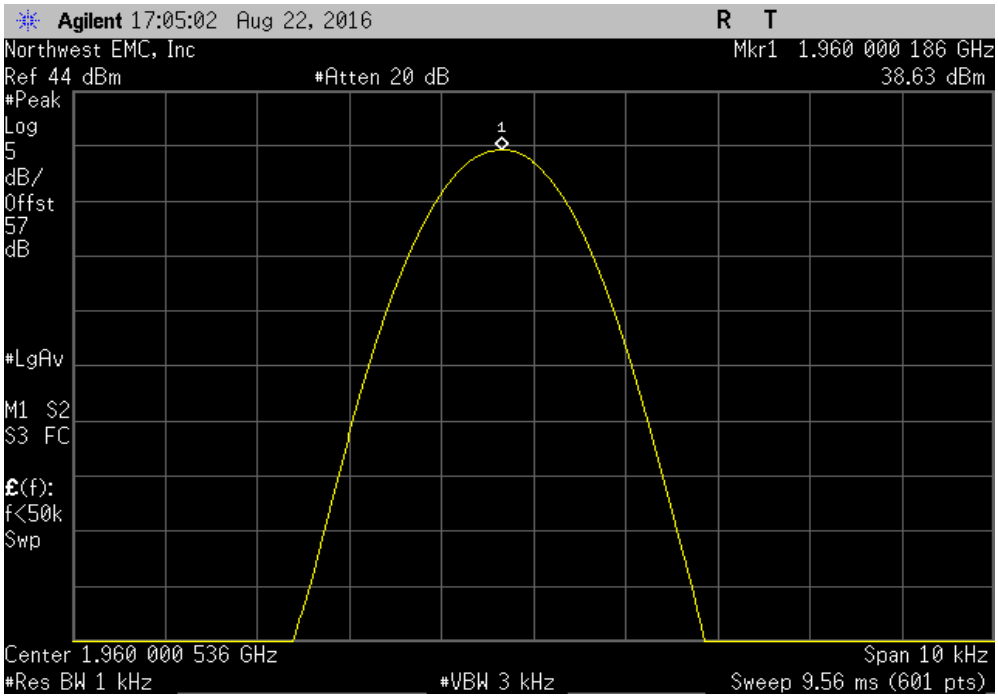
Port 2, Extreme Voltage, 40.8 VAC, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



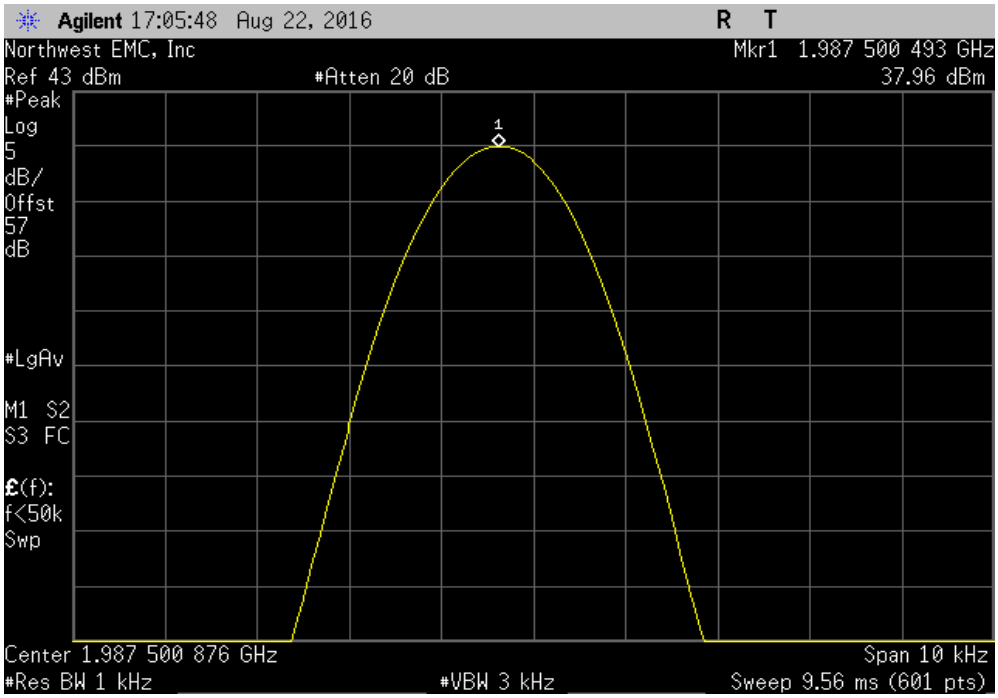
Port 2, Extreme Temperature, -30°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



Port 2, Extreme Temperature, -30°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 2, Extreme Temperature, -30°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500493	1987.5	0.3	1	Pass

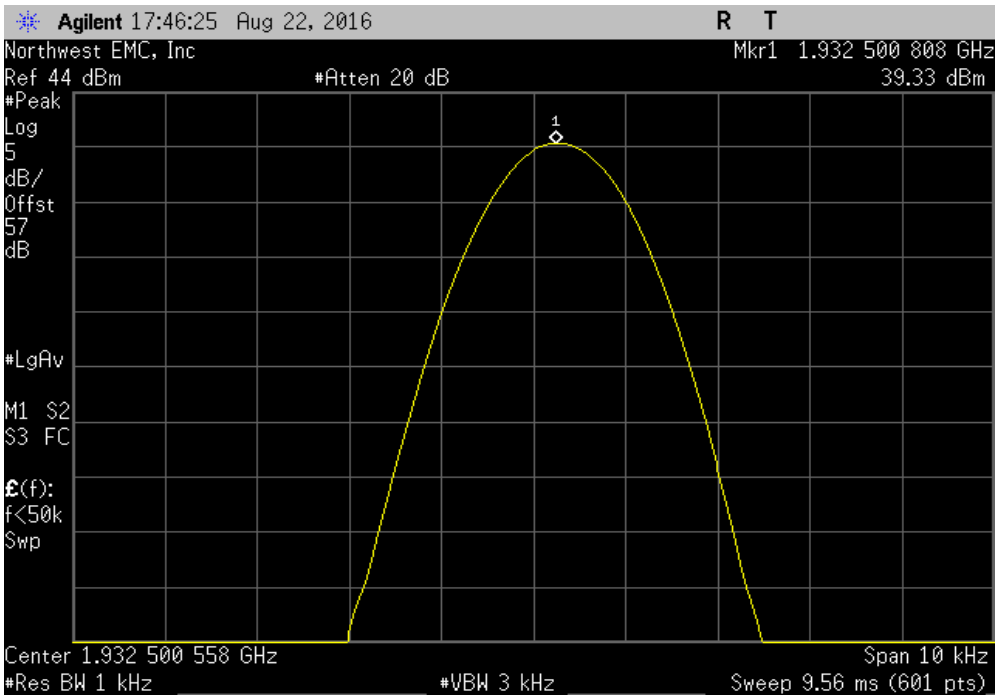


FREQUENCY STABILITY - WCDMA

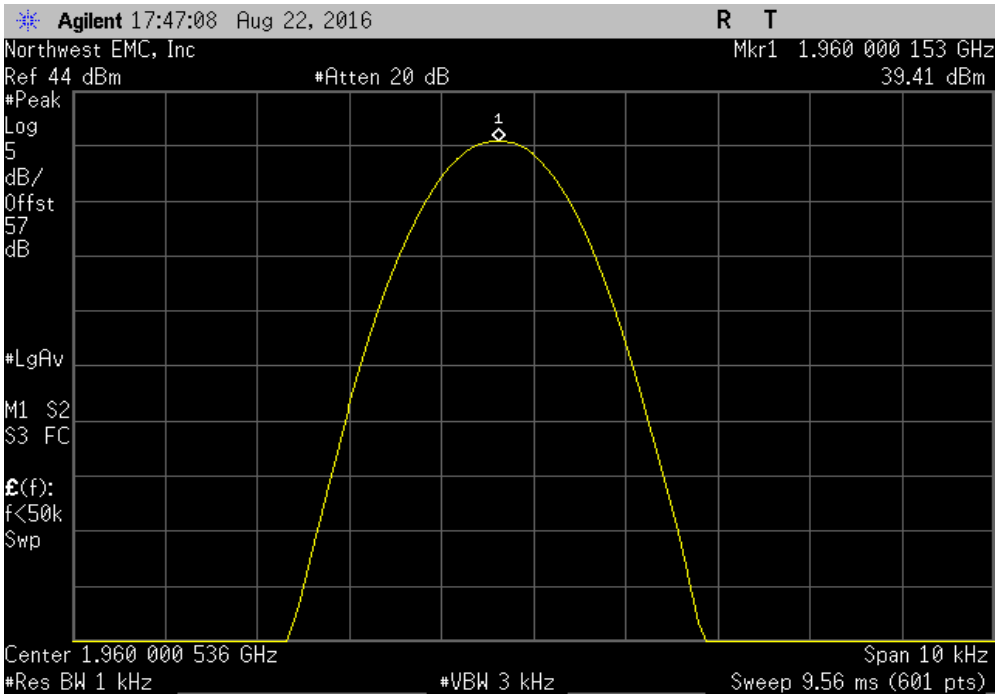
NORTHWEST EMC

XMit 2016.05.06

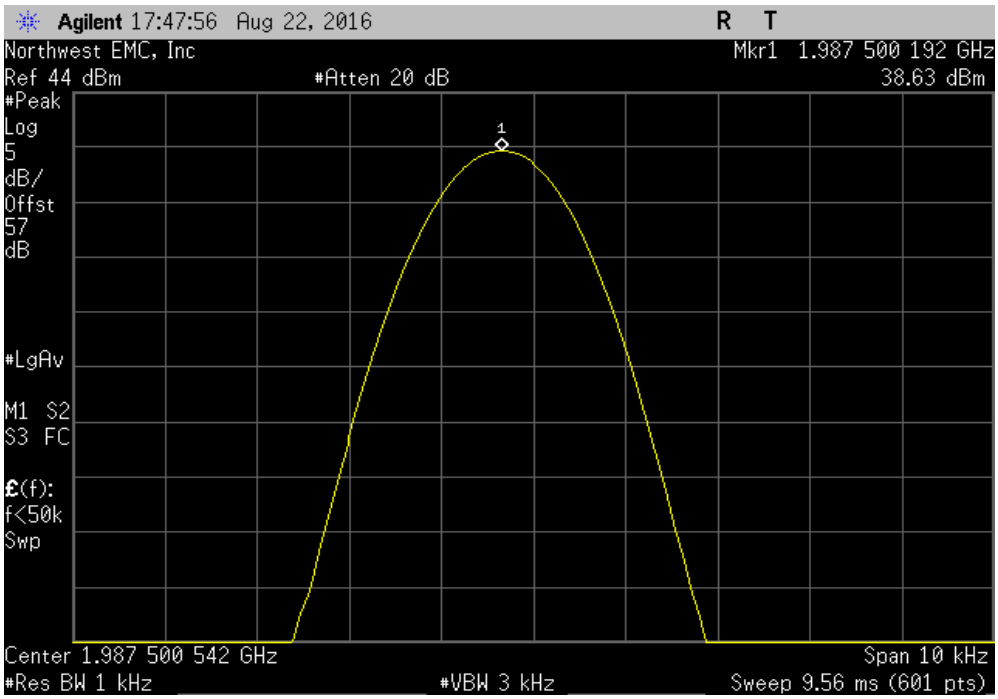
Port 2, Extreme Temperature, -20°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500808	1932.5	0.4	1	Pass



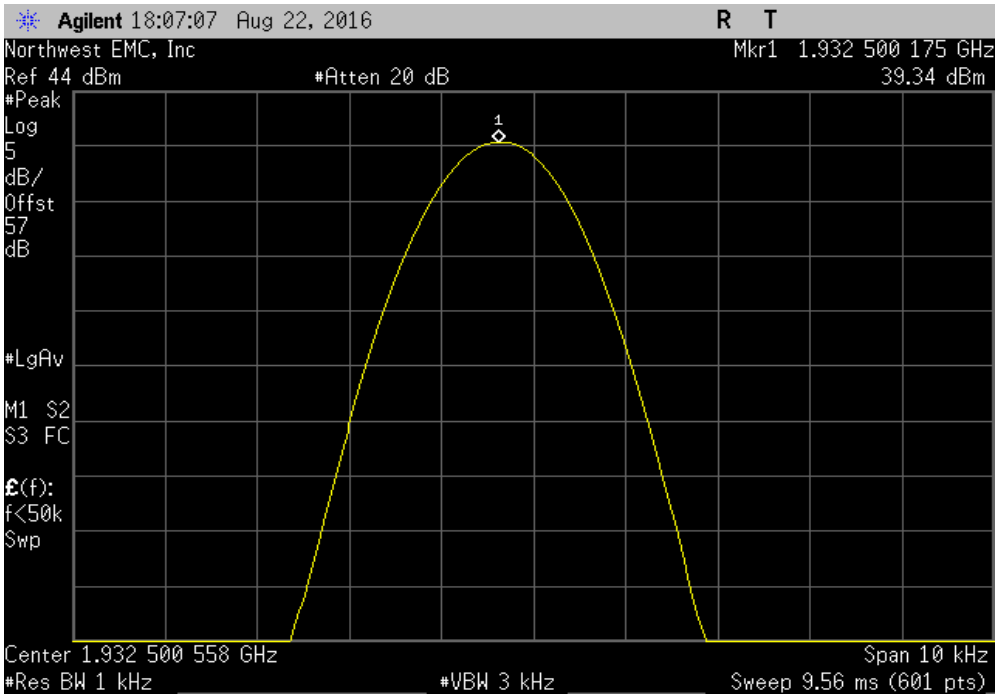
Port 2, Extreme Temperature, -20°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000153	1960	0.1	1	Pass



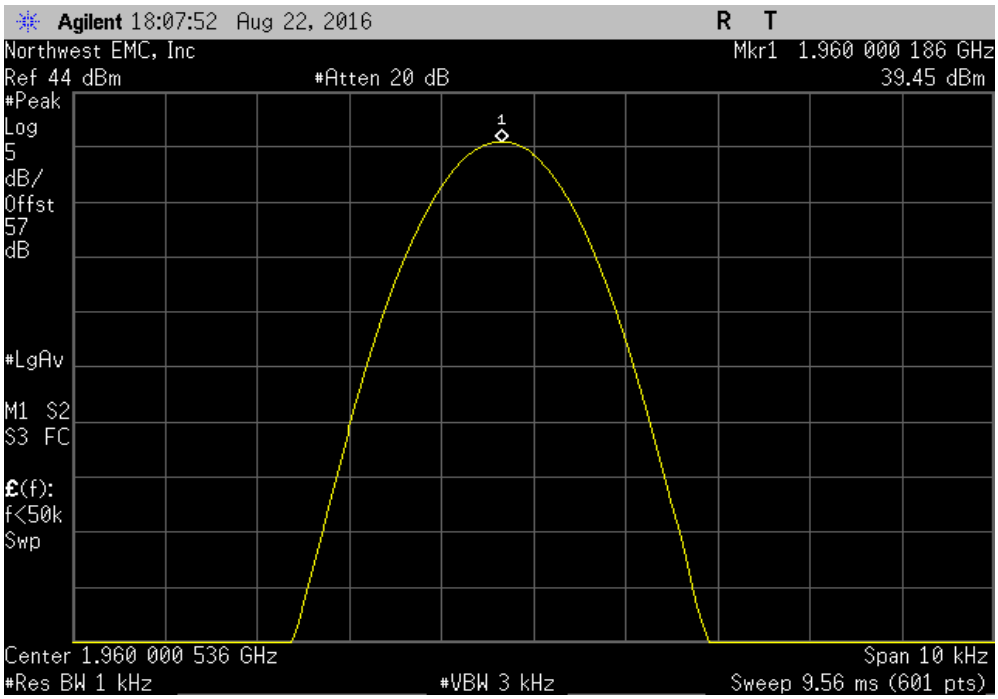
Port 2, Extreme Temperature, -20°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



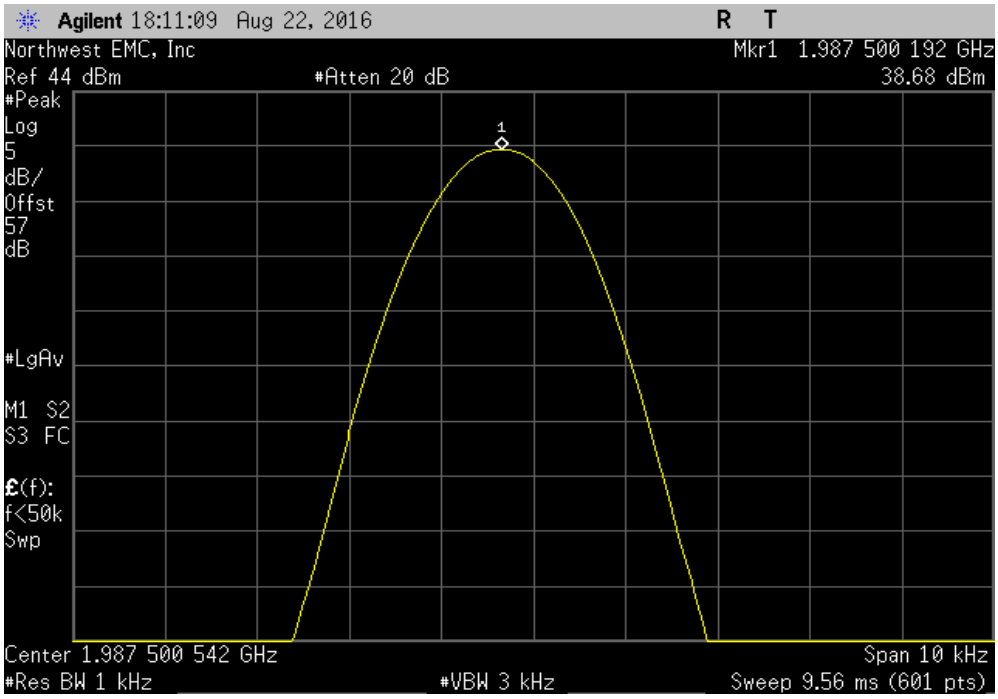
Port 2, Extreme Temperature, -10°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



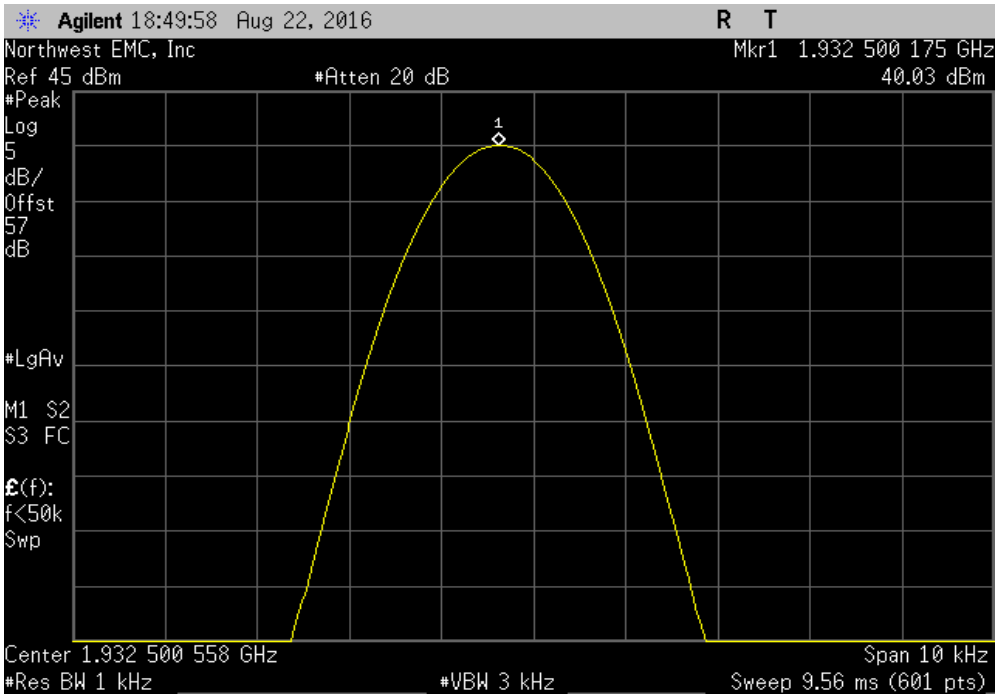
Port 2, Extreme Temperature, -10°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



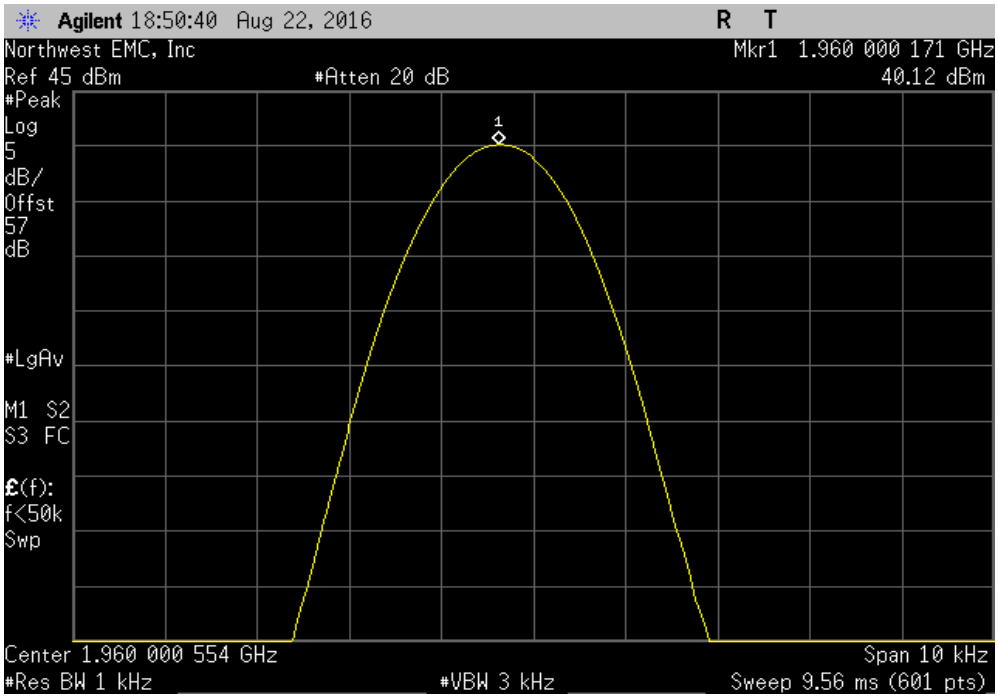
Port 2, Extreme Temperature, -10°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



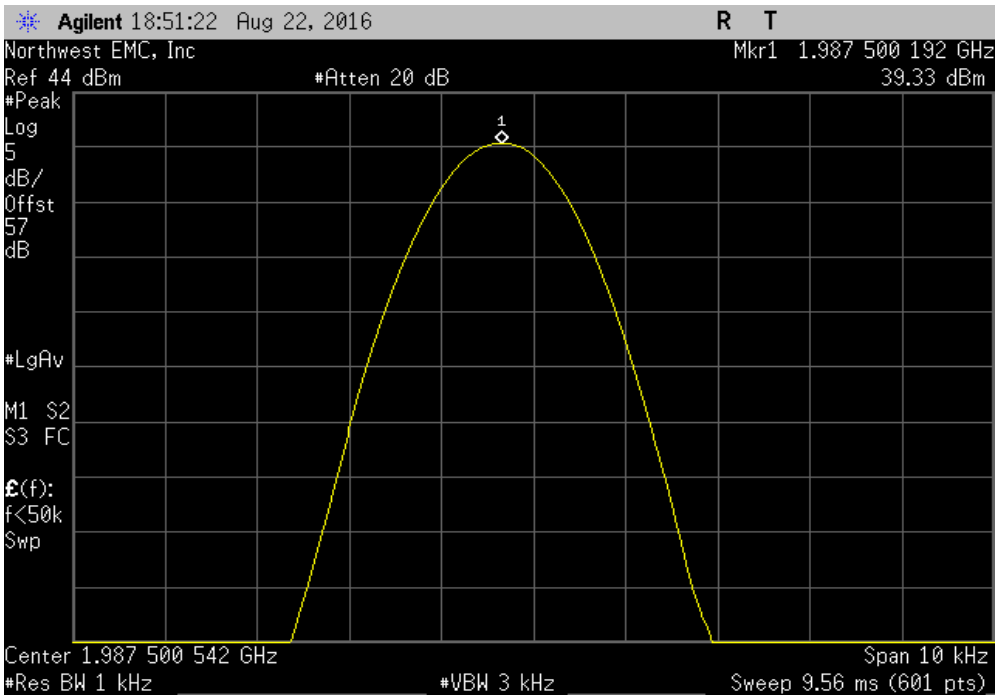
Port 2, Extreme Temperature, 0°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



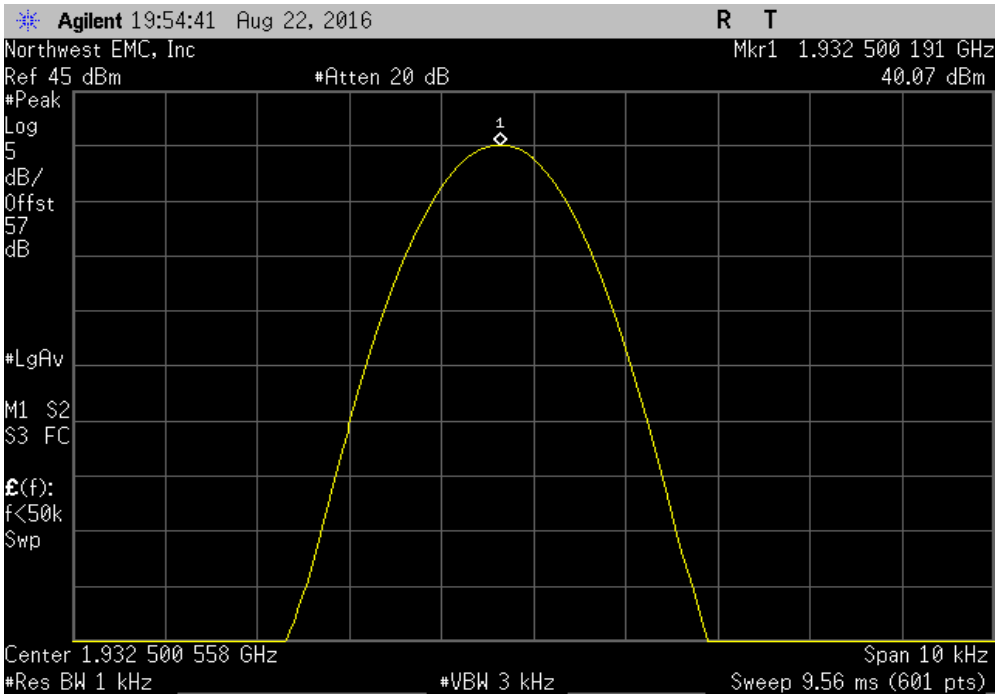
Port 2, Extreme Temperature, 0°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000171	1960	0.1	1	Pass



Port 2, Extreme Temperature, 0°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 2, Extreme Temperature, +10°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass

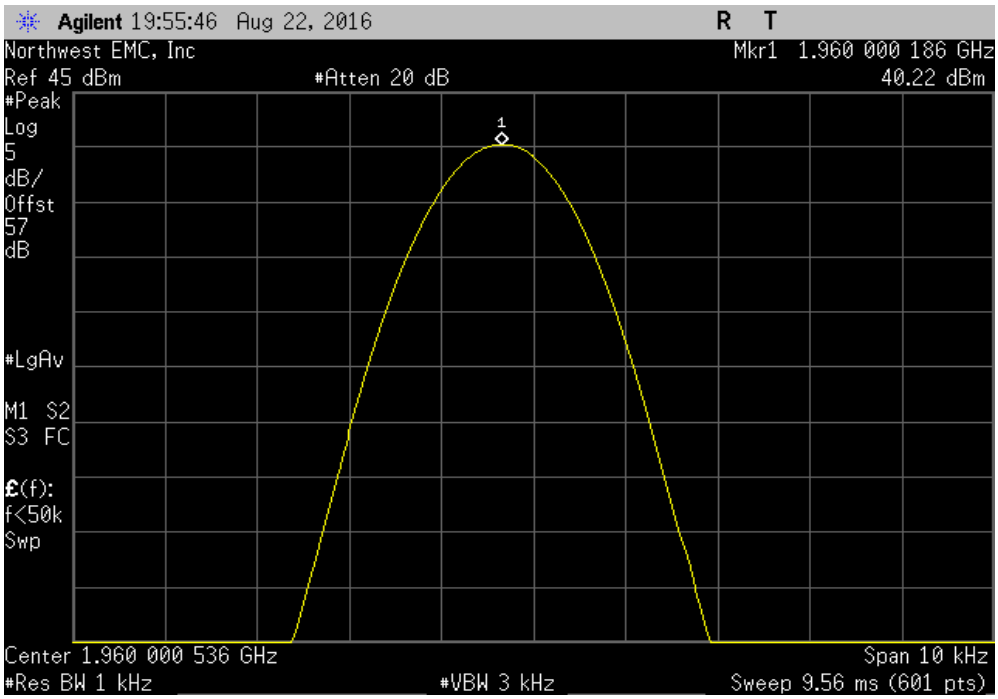


FREQUENCY STABILITY - WCDMA

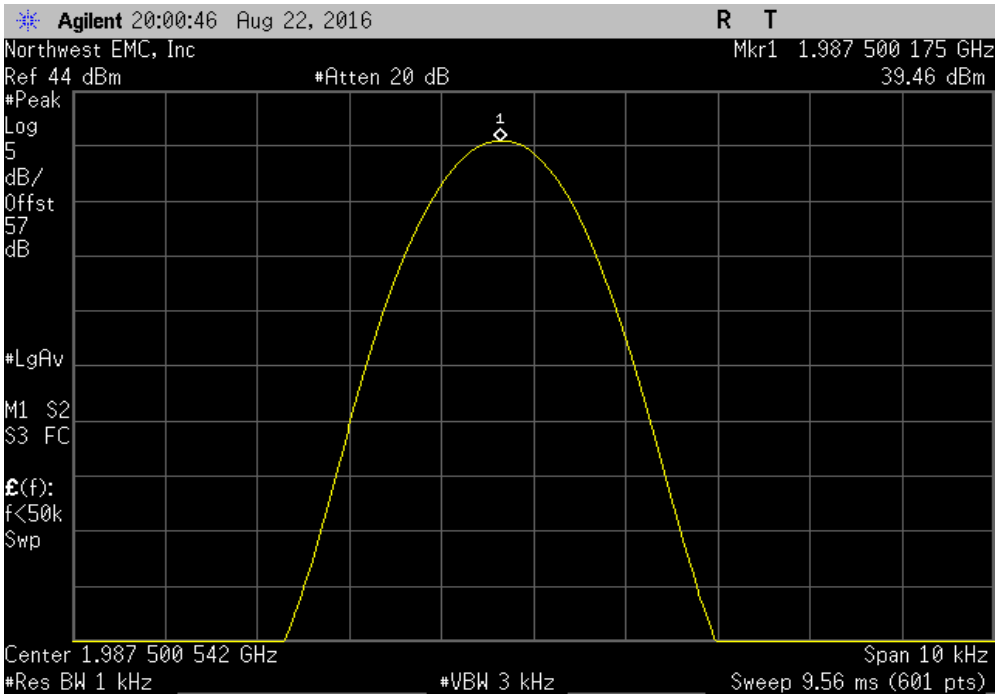
NORTHWEST EMC

XMit 2016.05.06

Port 2, Extreme Temperature, +10°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 2, Extreme Temperature, +10°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass

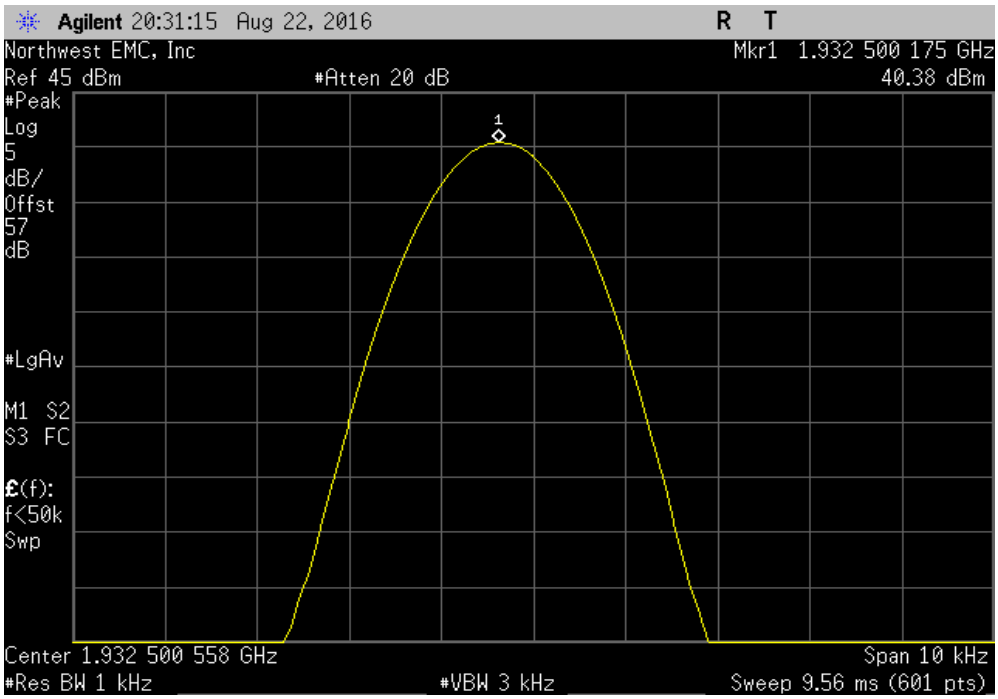


FREQUENCY STABILITY - WCDMA

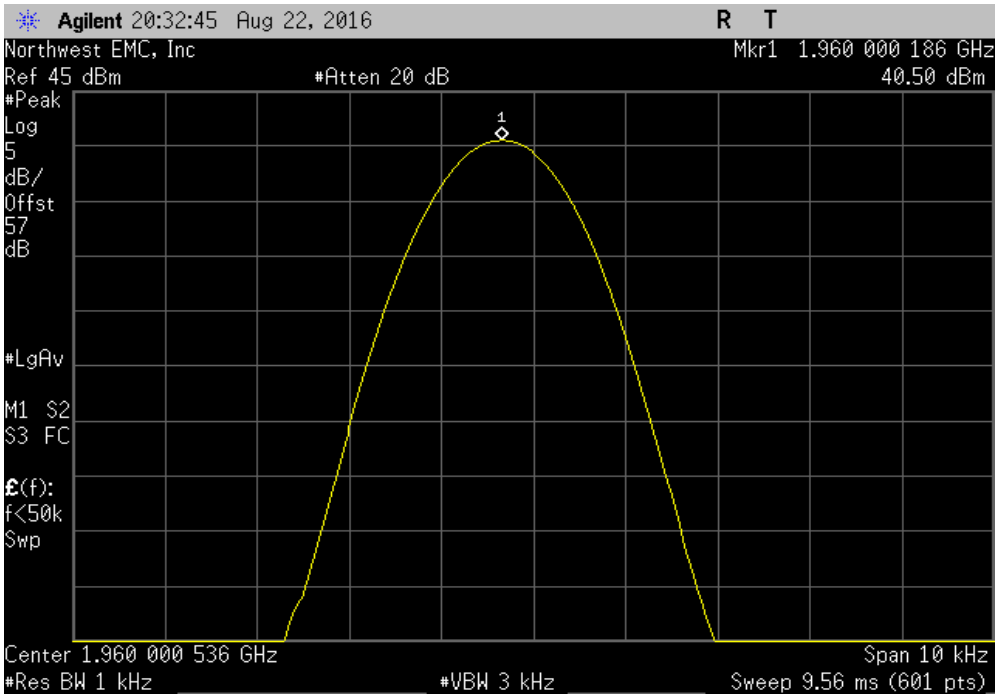
NORTHWEST EMC

XMit 2016.05.06

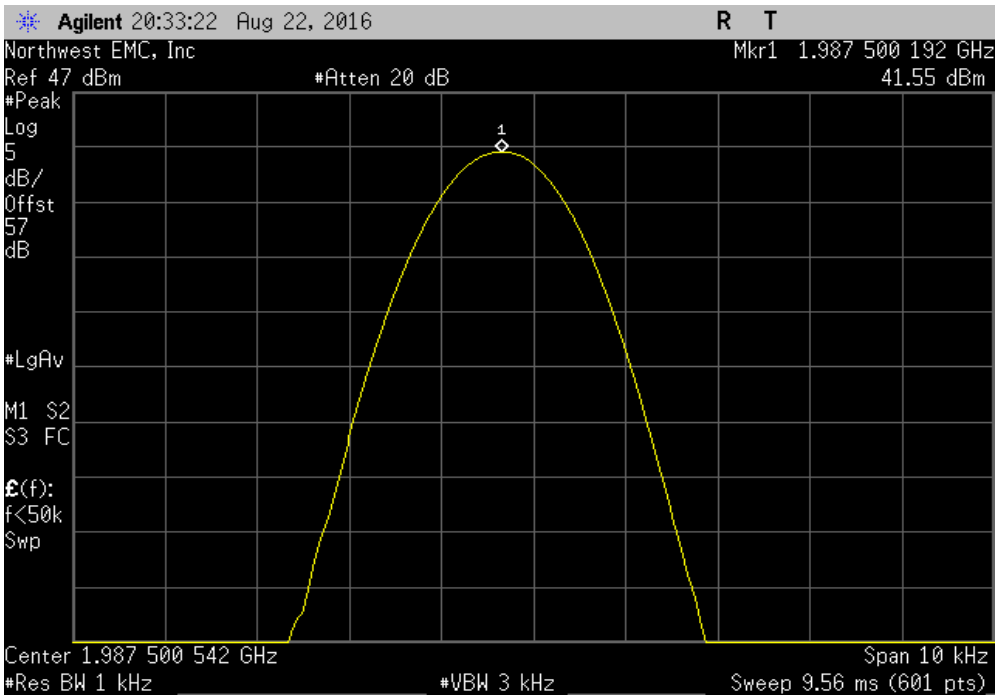
Port 2, Extreme Temperature, +20°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



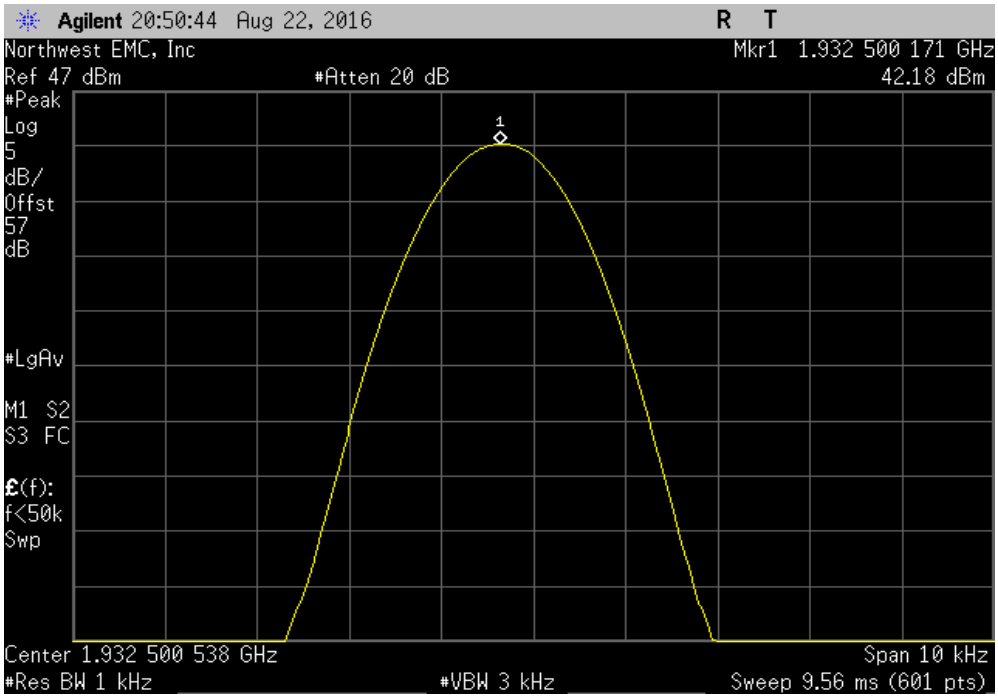
Port 2, Extreme Temperature, +20°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



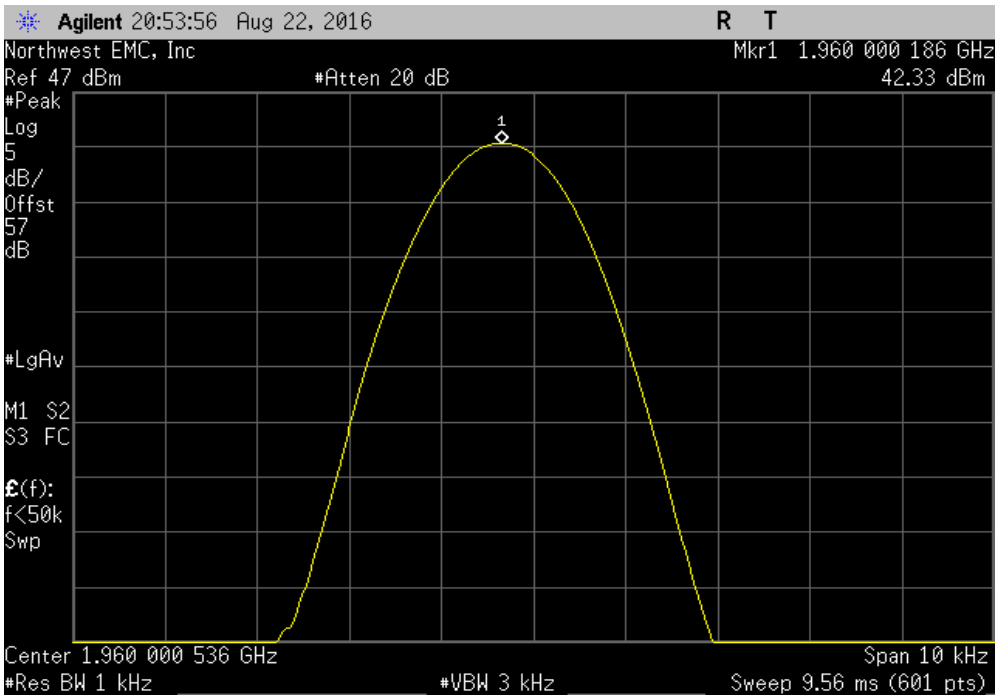
Port 2, Extreme Temperature, +20°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



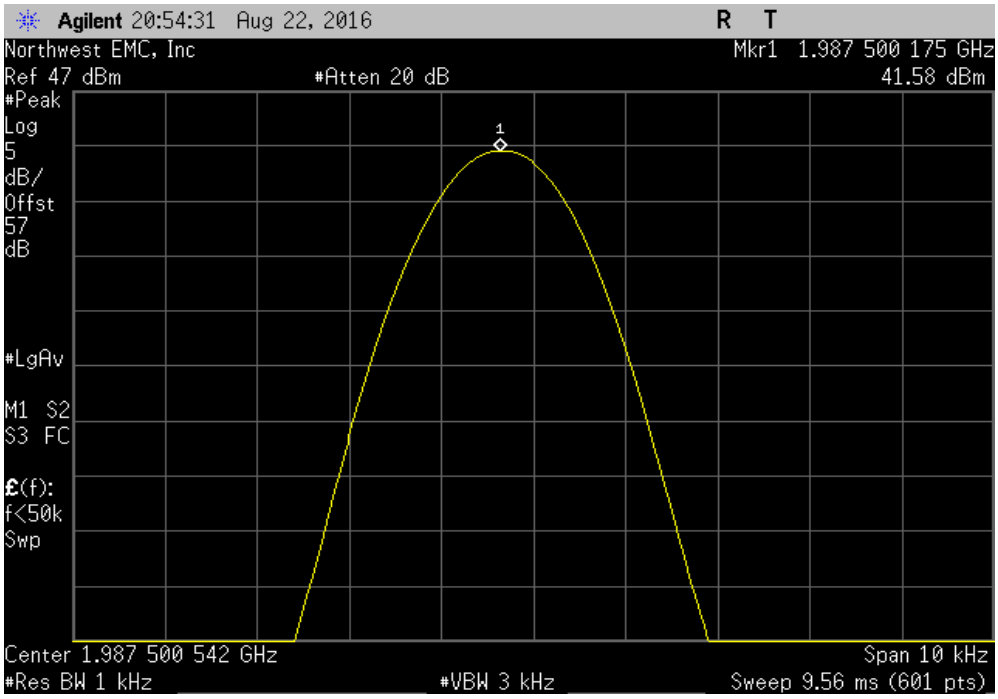
Port 2, Extreme Temperature, +30°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500171	1932.5	0.1	1	Pass



Port 2, Extreme Temperature, +30°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass



Port 2, Extreme Temperature, +30°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500175	1987.5	0.1	1	Pass

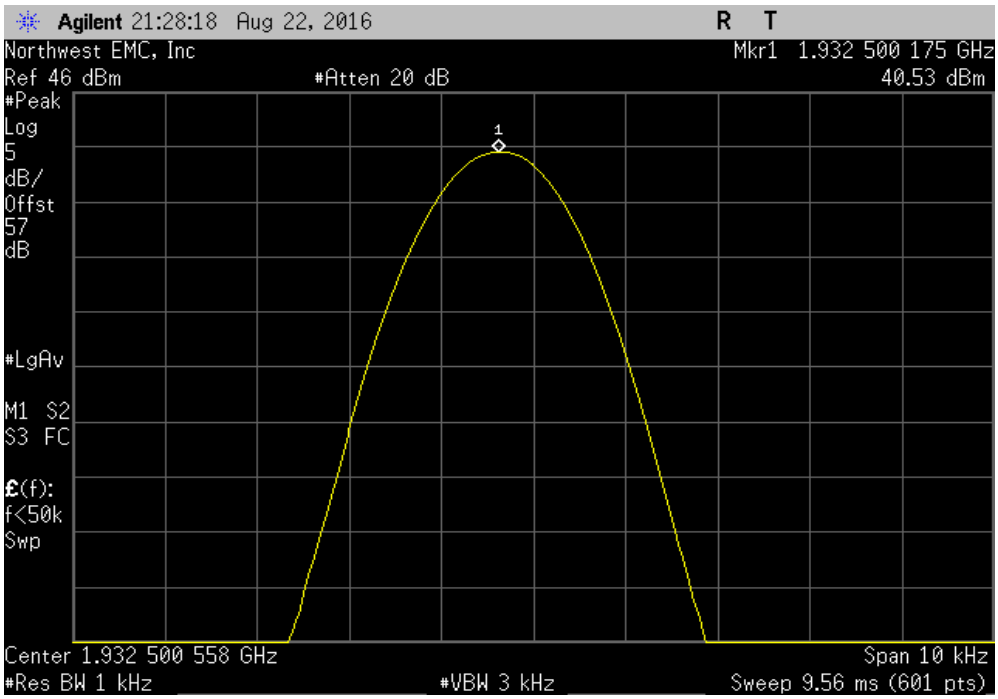


FREQUENCY STABILITY - WCDMA

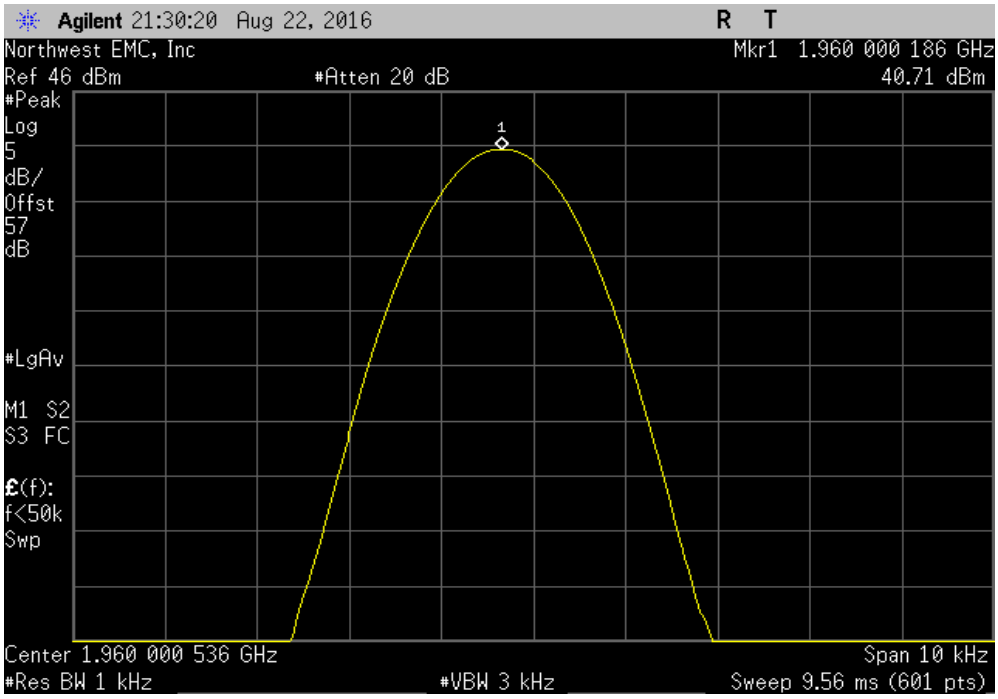
NORTHWEST EMC

XMit 2016.05.06

Port 2, Extreme Temperature, +40°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500175	1932.5	0.1	1	Pass



Port 2, Extreme Temperature, +40°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000186	1960	0.1	1	Pass

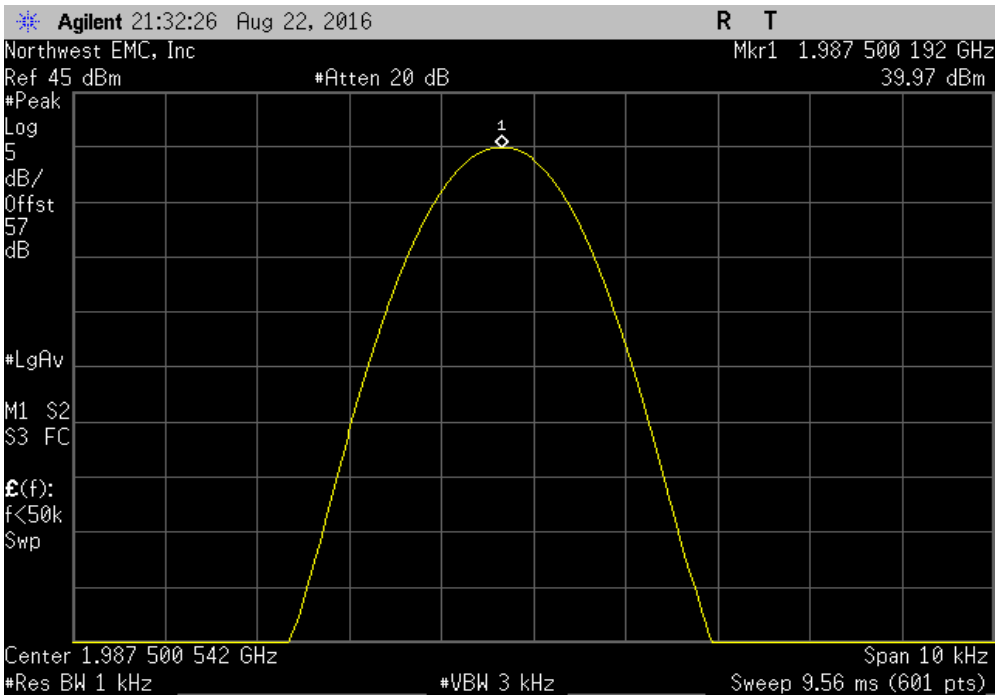


FREQUENCY STABILITY - WCDMA

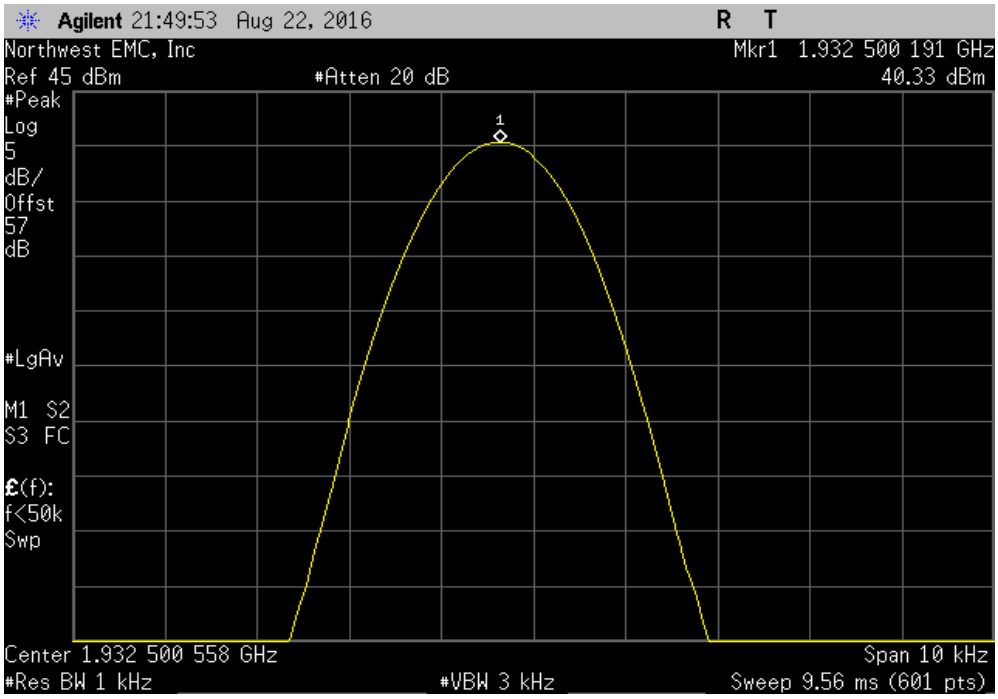
NORTHWEST EMC

XMit 2016.05.06

Port 2, Extreme Temperature, +40°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass



Port 2, Extreme Temperature, +50°C, Low Channel CW, 1932.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1932.500191	1932.5	0.1	1	Pass

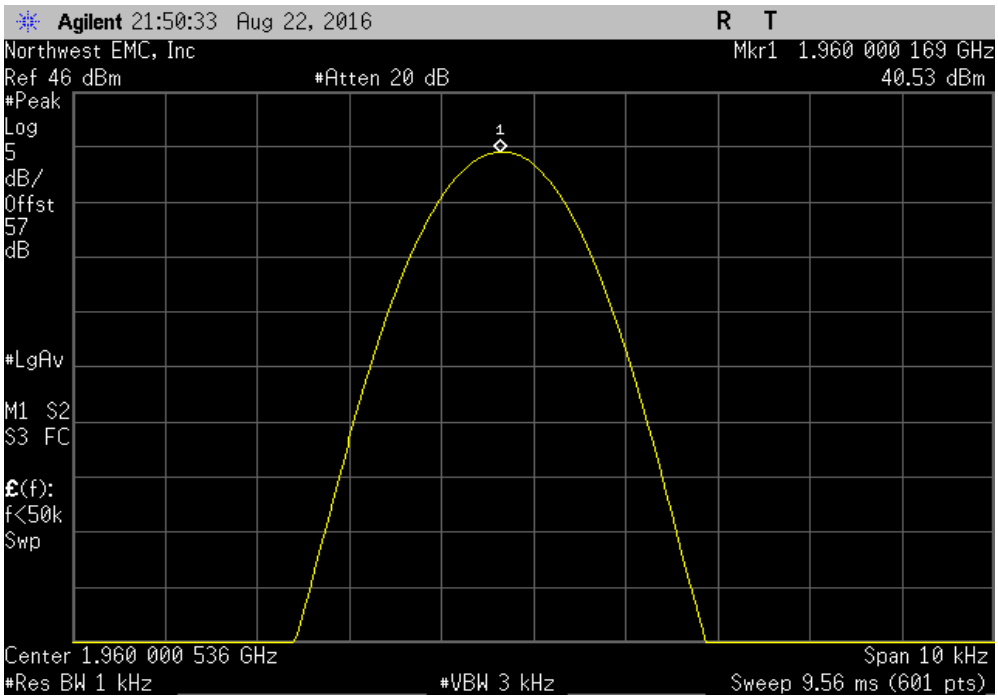


FREQUENCY STABILITY - WCDMA

NORTHWEST EMC

XMit 2016.05.06

Port 2, Extreme Temperature, +50°C, Mid Channel CW, 1960 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1960.000169	1960	0.1	1	Pass



Port 2, Extreme Temperature, +50°C, High Channel CW, 1987.5 MHz						
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
		1987.500192	1987.5	0.1	1	Pass