

NORTHWEST EMC

ZOLL Medical Corp.

X Series

FCC 15.207:2016

FCC 15.407:2016

802.11an SISO Radio

Report # LGPD0171



NVLAP Lab Code: 200881-0

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

CERTIFICATE OF TEST

Last Date of Test: March 9, 2016
ZOLL Medical Corp.
Model: X Series

Radio Equipment Testing

Standards

| Specification | Method |
|-----------------|------------------|
| FCC 15.207:2016 | ANSI C63.10:2013 |
| FCC 15.407:2016 | |

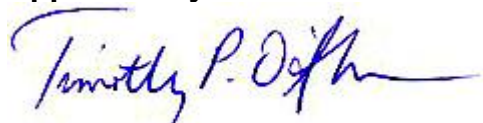
Results

| Method Clause | Test Description | Applied | Results | Comments |
|---------------|--------------------------------|---------|---------|----------|
| 6.2 | Powerline Conducted Emissions | Yes | Pass | |
| 6.5, 6.6 | Spurious Radiated Emissions | Yes | Pass | |
| 6.8 | Frequency Stability | Yes | Pass | |
| 12.2 | Duty Cycle | Yes | Pass | |
| 12.3.2.4 | Maximum Conducted Output Power | Yes | Pass | |
| 12.4.1 | Emission Bandwidth | Yes | Pass | |
| 12.4.2 | Occupied Bandwidth | Yes | Pass | |
| 12.4.2 | Band Edge | Yes | Pass | |
| 12.5 | Maximum Power Spectral Density | Yes | Pass | |

Deviations From Test Standards

None

Approved By:



Tim O'Shea, 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

| Revision Number | | Description | Date | Page Number |
|-----------------|--|-------------|------|-------------|
| 00 | | None | | |

ACCREDITATIONS AND AUTHORIZATIONS

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

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

European Union

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

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

Measurement Uncertainty

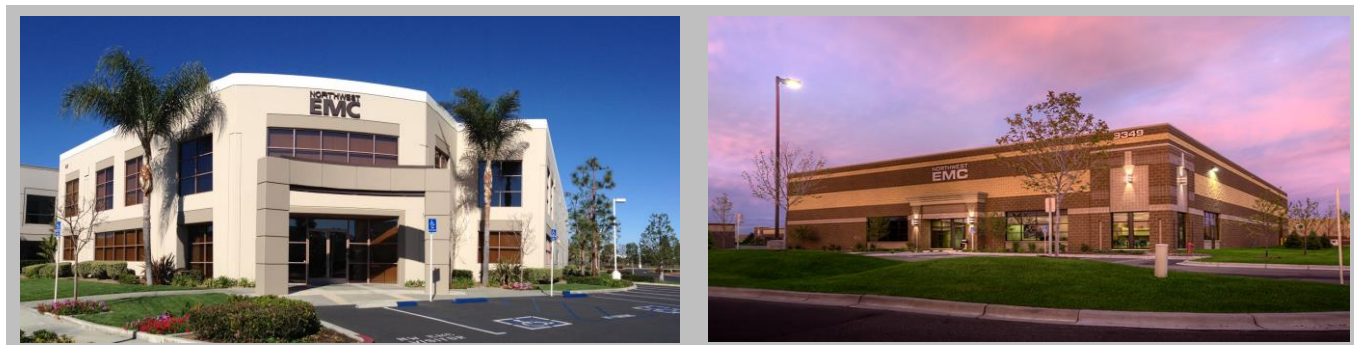
When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement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

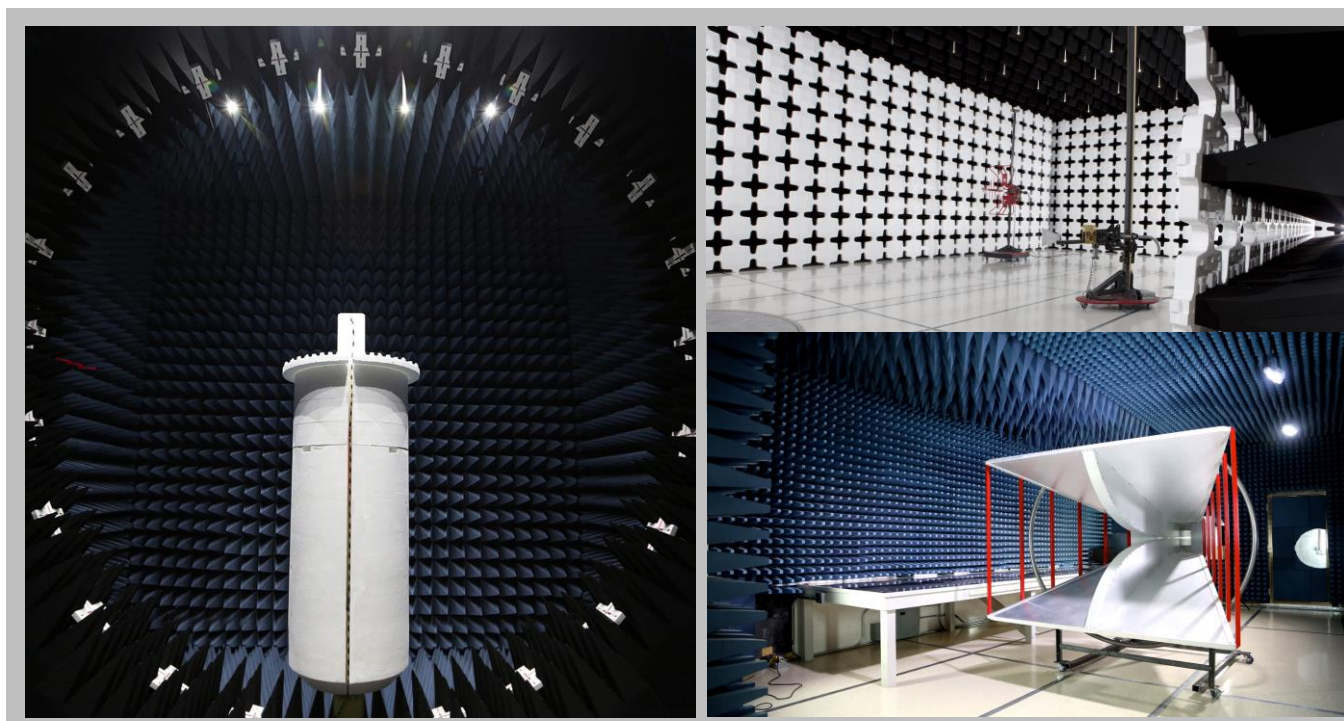
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

| 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



| | | | | | |
|---|---|--|---|--|---|
| California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918 | Minnesota Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136 | New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214 | Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066 | Texas Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255 | Washington Labs NC01-05 19201 120 th 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 |
| Industry 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/RRR, MIC, MOC, NCC, OFCA | | | | | |
| US0158 | US0175 | N/A | US0017 | US0191 | US0157 |



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

| | |
|---------------------------------|-------------------------|
| Company Name: | ZOLL Medical Corp. |
| Address: | 269 Mill Road |
| City, State, Zip: | Chelmsford, MA 01824 |
| Test Requested By: | Adam Ford with Logic PD |
| Model: | X Series |
| First Date of Test: | February 29, 2016 |
| Last Date of Test: | March 9, 2016 |
| Receipt Date of Samples: | February 23, 2016 |
| Equipment Design Stage: | Production |
| Equipment Condition: | No Damage |

Information Provided by the Party Requesting the Test

| |
|---|
| Functional Description of the EUT: |
| 802.11 a/b/g/n card that goes in the ZOLL Medical Corp product |
| Testing Objective: |
| To demonstrate compliance of the 802.11 radio under the new version of FCC 15.407 for operation in the 5.2 GHz, 5.3 GHz, 5.6 GHz and 5.8 GHz bands. |

CONFIGURATIONS

Configuration LGPD0171- 1

| Software/Firmware Running during test | | | |
|---------------------------------------|--|---------|--|
| Description | | Version | |
| TeraTerm | | Unknown | |

| EUT | | | |
|-------------------------|--------------------|-------------------|---------------|
| Description | Manufacturer | Model/Part Number | Serial Number |
| X Series (Radio Module) | ZOLL Medical Corp. | ZOL02-0301R-A | 1023259 |
| Zoll Antenna | ZOLL Medical Corp. | 1020247 | 1020247 |

| Peripherals in test setup boundary | | | |
|------------------------------------|--------------|-------------------|------------------------------|
| Description | Manufacturer | Model/Part Number | Serial Number |
| AC Adapter (Laptop) | Dell | DA180PM111 | CN-074X5J-48661-15V-0WZ1-A00 |
| AC/DC Adapter (Test Laptop) | Lenovo | 95P1156 | None |
| Laptop | Dell | Latitude | Unknown |
| Test Laptop | Lenovo | ThinkPad | Unknown |

| Cables | | | | | |
|------------------------------|---------|------------|---------|--------------|----------------|
| Cable Type | Shield | Length (m) | Ferrite | Connection 1 | Connection 2 |
| AC Power Cable (Laptop) | No | 1.0m | No | AC Mains | AC Adapter |
| AC Power Cable (Test Laptop) | Unknown | 1.5m | No | AC Mains | AC Adapter |
| DC Cable (Laptop) | No | 1m | No | AC Adapter | Laptop |
| Ethernet | No | 1.5m | No | Access Point | Laptop |
| Serial Cable | Yes | 1.8m | No | Laptop | Zoll Dev Board |

Configuration LGPD0171- 2

| Software/Firmware Running during test | | | |
|---------------------------------------|--|---------|--|
| Description | | Version | |
| TeraTerm | | Unknown | |

| EUT | | | |
|-------------------------|--------------------|-------------------|---------------|
| Description | Manufacturer | Model/Part Number | Serial Number |
| X Series (Radio Module) | ZOLL Medical Corp. | ZOL02-0301R-A | 1023259 |
| Zoll Antenna | ZOLL Medical Corp. | 1020247 | 1020247 |

| Peripherals in test setup boundary | | | |
|------------------------------------|--------------------|------------------------|---------------|
| Description | Manufacturer | Model/Part Number | Serial Number |
| AC/DC Adapter (Test Laptop) | Lenovo | 95P1156 | None |
| Test Laptop | Lenovo | ThinkPad | Unknown |
| Zoll Development Board | ZOLL Medical Corp. | IRIS Monitor Simulator | None |

| Cables | | | | | |
|------------------------------|---------|------------|---------|--------------|----------------|
| Cable Type | Shield | Length (m) | Ferrite | Connection 1 | Connection 2 |
| AC Power Cable (Test Laptop) | Unknown | 1.5m | No | AC Mains | AC Adapter |
| DC Cable (Laptop) | No | 1m | No | AC Adapter | Laptop |
| Serial Cable | Yes | 1.8m | No | Laptop | Zoll Dev Board |

MODIFICATIONS

Equipment Modifications

| Item | Date | Test | Modification | Note | Disposition of EUT |
|------|-----------|------------------------------------|--------------------------------------|---|---|
| 1 | 2/29/2016 | Spurious Radiated Emissions | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Northwest EMC following the test. |
| 2 | 3/3/2016 | AC – Powerline Conducted Emissions | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Northwest EMC following the test. |
| 3 | 3/7/2016 | Duty Cycle | 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 | 3/7/2016 | Emission Bandwidth | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Northwest EMC following the test. |
| 5 | 3/7/2016 | 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. |
| 6 | 3/7/2016 | Maximum Conducted Output Power | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Northwest EMC following the test. |
| 7 | 3/7/2016 | Maximum Power Spectral Density | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Northwest EMC following the test. |
| 8 | 3/7/2016 | Band Edge | 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 | 3/9/2016 | Frequency Stability | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | Scheduled testing was completed. |

AC POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Per the standard, an insulating material was also added to ground plane between the EUT's power and remote I/O cables. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Cal. Due |
|----------------------------------|-------------------|------------------|-----|-----------|-----------|
| Receiver | Rohde & Schwarz | ESR7 | ARI | 5/21/2015 | 5/21/2016 |
| LISN | Solar Electronics | 9252-50-R-24-BNC | LIY | 3/23/2015 | 3/23/2016 |
| LISN | Solar Electronics | 9252-50-R-24-BNC | LIQ | 11/3/2015 | 11/3/2016 |
| Filter - High Pass | TTE | H97-100K-50-720B | HGN | NCR | NCR |
| Cable - Conducted Cable Assembly | Northwest EMC | None | MNC | NCR | NCR |

MEASUREMENT UNCERTAINTY

| Description | | |
|--------------|--------|---------|
| Expanded k=2 | 2.4 dB | -2.4 dB |

CONFIGURATIONS INVESTIGATED

LGPD0171-2

MODES INVESTIGATED

Continuous single channel transmit, Channel 48 5240 MHz, 6 Mbps
Continuous single channel transmit, Channel 120 5600 MHz, 6 Mbps
Continuous single channel transmit, Channel 157 5785 MHz, 6 Mbps

AC POWERLINE CONDUCTED EMISSIONS

| | | | |
|-------------------|--------------------|--------------------|------------|
| EUT: | X Series | Work Order: | LGPD0171 |
| Serial Number: | 1023259 | Date: | 03/03/2016 |
| Customer: | ZOLL Medical Corp. | Temperature: | 22°C |
| Attendees: | None | Relative Humidity: | 20% |
| Customer Project: | None | Bar. Pressure: | 988 mb |
| Tested By: | Jared Ison | Job Site: | MN03 |
| Power: | 15 VDC | Configuration: | LGPD0171-2 |

TEST SPECIFICATIONS

| | |
|-----------------|------------------|
| Specification: | Method: |
| FCC 15.207:2016 | ANSI C63.10:2013 |

TEST PARAMETERS

| | | | | | |
|--------|---|-------|---------------|-----------------------------|---|
| Run #: | 1 | Line: | Negative Lead | Add. Ext. Attenuation (dB): | 0 |
|--------|---|-------|---------------|-----------------------------|---|

COMMENTS

| |
|-----------------------------|
| Channel 48, 5240 MHz 6 Mbps |
|-----------------------------|

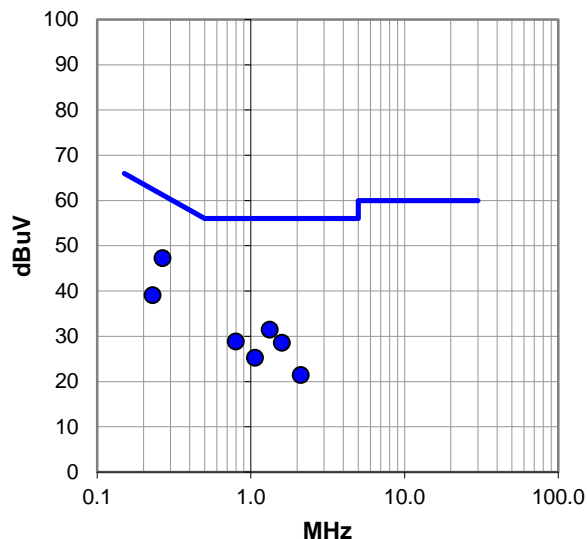
EUT OPERATING MODES

| |
|-------------------------------------|
| Continuous single channel transmit. |
|-------------------------------------|

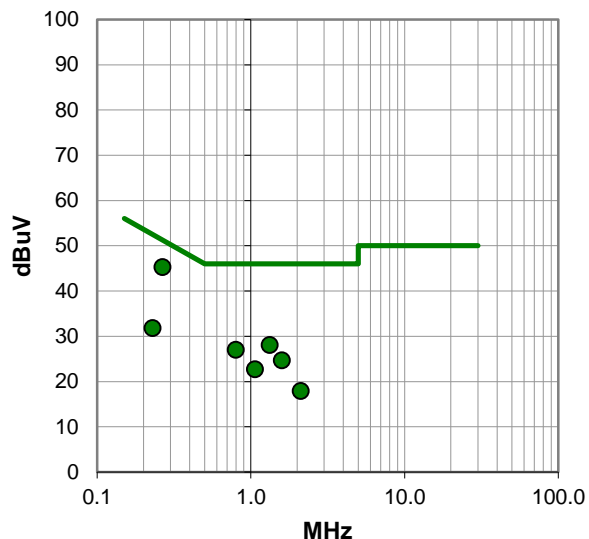
DEVIATIONS FROM TEST STANDARD

| |
|------|
| None |
|------|

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #1

Quasi Peak Data - vs - Quasi Peak Limit

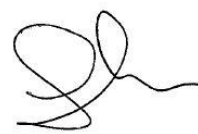
| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.266 | 27.0 | 20.2 | 47.2 | 61.2 | -14.0 |
| 0.230 | 18.8 | 20.3 | 39.1 | 62.4 | -23.4 |
| 1.330 | 11.3 | 20.1 | 31.4 | 56.0 | -24.6 |
| 0.797 | 8.7 | 20.1 | 28.8 | 56.0 | -27.2 |
| 1.596 | 8.4 | 20.2 | 28.6 | 56.0 | -27.4 |
| 1.063 | 5.1 | 20.1 | 25.2 | 56.0 | -30.8 |
| 2.110 | 1.2 | 20.2 | 21.4 | 56.0 | -34.6 |

Average Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.266 | 25.0 | 20.2 | 45.2 | 51.2 | -6.0 |
| 1.330 | 7.9 | 20.1 | 28.0 | 46.0 | -18.0 |
| 0.797 | 6.9 | 20.1 | 27.0 | 46.0 | -19.0 |
| 0.230 | 11.5 | 20.3 | 31.8 | 52.4 | -20.7 |
| 1.596 | 4.5 | 20.2 | 24.7 | 46.0 | -21.3 |
| 1.063 | 2.6 | 20.1 | 22.7 | 46.0 | -23.3 |
| 2.110 | -2.3 | 20.2 | 17.9 | 46.0 | -28.1 |

CONCLUSION

Pass



Tested By

AC POWERLINE CONDUCTED EMISSIONS

| | | | |
|-------------------|--------------------|--------------------|------------|
| EUT: | X Series | Work Order: | LGPD0171 |
| Serial Number: | 1023259 | Date: | 03/03/2016 |
| Customer: | ZOLL Medical Corp. | Temperature: | 22°C |
| Attendees: | None | Relative Humidity: | 20% |
| Customer Project: | None | Bar. Pressure: | 988 mb |
| Tested By: | Jared Ison | Job Site: | MN03 |
| Power: | 15 VDC | Configuration: | LGPD0171-2 |

TEST SPECIFICATIONS

| | |
|-----------------|------------------|
| Specification: | Method: |
| FCC 15.207:2016 | ANSI C63.10:2013 |

TEST PARAMETERS

| | | | | | |
|--------|---|-------|---------------|-----------------------------|---|
| Run #: | 2 | Line: | Positive Lead | Add. Ext. Attenuation (dB): | 0 |
|--------|---|-------|---------------|-----------------------------|---|

COMMENTS

| |
|-----------------------------|
| Channel 48, 5240 MHz 6 Mbps |
|-----------------------------|

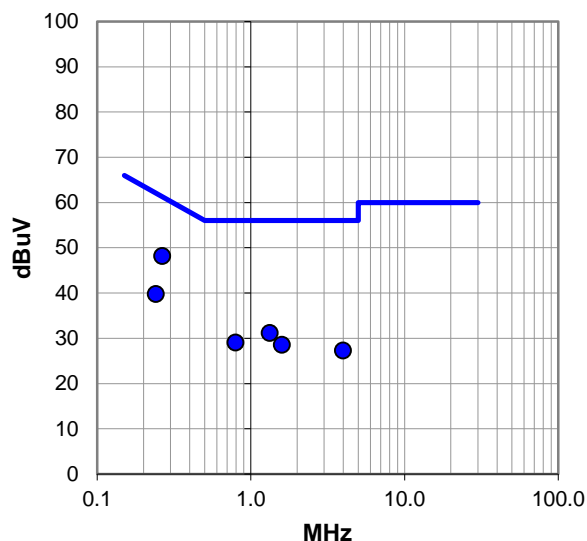
EUT OPERATING MODES

| |
|-------------------------------------|
| Continuous single channel transmit. |
|-------------------------------------|

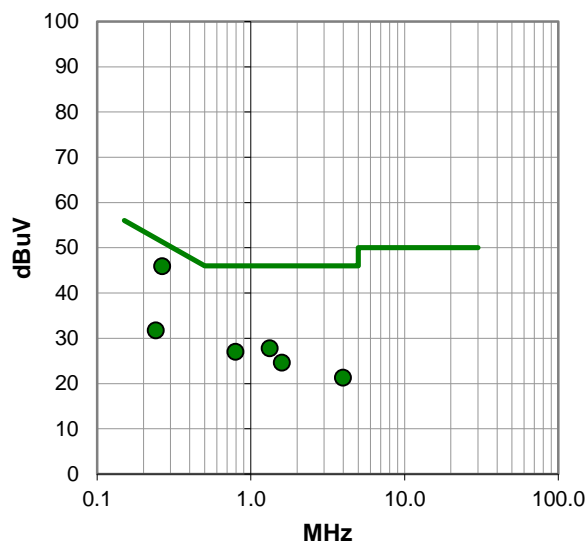
DEVIATIONS FROM TEST STANDARD

| |
|------|
| None |
|------|

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #2

Quasi Peak Data - vs - Quasi Peak Limit

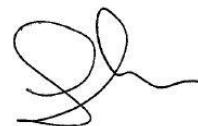
| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|---------------|----------------|----------------|--------------------|--------------------------|----------------|
| 0.265 | 27.9 | 20.2 | 48.1 | 61.3 | -13.1 |
| 0.242 | 19.5 | 20.2 | 39.7 | 62.0 | -22.3 |
| 1.327 | 11.0 | 20.1 | 31.1 | 56.0 | -24.9 |
| 0.796 | 8.9 | 20.1 | 29.0 | 56.0 | -27.0 |
| 1.592 | 8.4 | 20.2 | 28.6 | 56.0 | -27.4 |
| 3.981 | 6.9 | 20.3 | 27.2 | 56.0 | -28.8 |

Average Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|---------------|----------------|----------------|--------------------|--------------------------|----------------|
| 0.265 | 25.7 | 20.2 | 45.9 | 51.3 | -5.3 |
| 1.327 | 7.6 | 20.1 | 27.7 | 46.0 | -18.3 |
| 0.796 | 6.9 | 20.1 | 27.0 | 46.0 | -19.0 |
| 0.242 | 11.5 | 20.2 | 31.7 | 52.0 | -20.3 |
| 1.592 | 4.4 | 20.2 | 24.6 | 46.0 | -21.4 |
| 3.981 | 0.9 | 20.3 | 21.2 | 46.0 | -24.8 |

CONCLUSION

Pass



Tested By

AC POWERLINE CONDUCTED EMISSIONS

| | | | |
|-------------------|--------------------|--------------------|------------|
| EUT: | X Series | Work Order: | LGPD0171 |
| Serial Number: | 1023259 | Date: | 03/03/2016 |
| Customer: | ZOLL Medical Corp. | Temperature: | 22°C |
| Attendees: | None | Relative Humidity: | 20% |
| Customer Project: | None | Bar. Pressure: | 988 mb |
| Tested By: | Jared Ison | Job Site: | MN03 |
| Power: | 15 VDC | Configuration: | LGPD0171-2 |

TEST SPECIFICATIONS

| | |
|-----------------|------------------|
| Specification: | Method: |
| FCC 15.207:2016 | ANSI C63.10:2013 |

TEST PARAMETERS

| | | | | | |
|--------|---|-------|---------------|-----------------------------|---|
| Run #: | 3 | Line: | Positive Lead | Add. Ext. Attenuation (dB): | 0 |
|--------|---|-------|---------------|-----------------------------|---|

COMMENTS

| |
|------------------------------|
| Channel 120, 5600 MHz 6 Mbps |
|------------------------------|

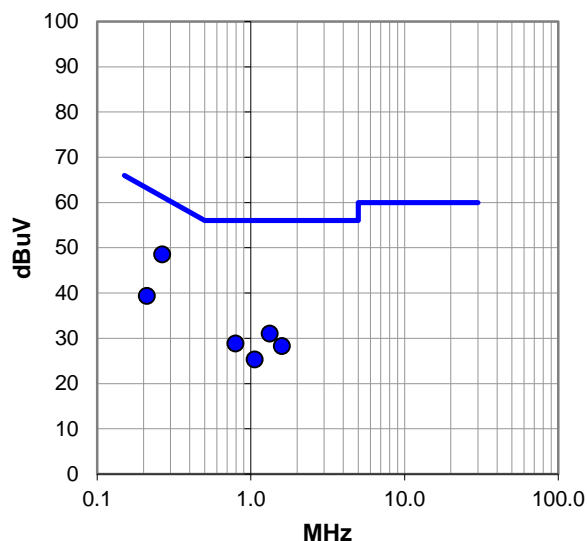
EUT OPERATING MODES

| |
|-------------------------------------|
| Continuous single channel transmit. |
|-------------------------------------|

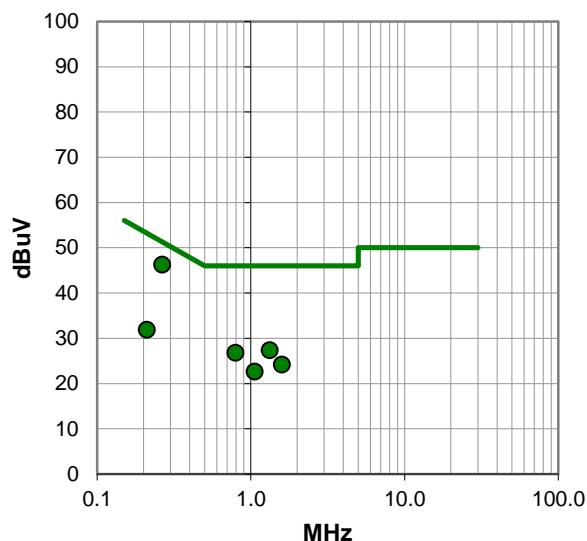
DEVIATIONS FROM TEST STANDARD

| |
|------|
| None |
|------|

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #3

Quasi Peak Data - vs - Quasi Peak Limit

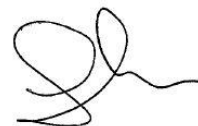
| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 28.3 | 20.2 | 48.5 | 61.3 | -12.7 |
| 0.211 | 19.1 | 20.3 | 39.4 | 63.2 | -23.8 |
| 1.325 | 10.9 | 20.1 | 31.0 | 56.0 | -25.0 |
| 0.796 | 8.7 | 20.1 | 28.8 | 56.0 | -27.2 |
| 1.590 | 8.1 | 20.2 | 28.3 | 56.0 | -27.7 |
| 1.061 | 5.2 | 20.1 | 25.3 | 56.0 | -30.7 |

Average Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 26.0 | 20.2 | 46.2 | 51.3 | -5.0 |
| 1.325 | 7.2 | 20.1 | 27.3 | 46.0 | -18.7 |
| 0.796 | 6.7 | 20.1 | 26.8 | 46.0 | -19.2 |
| 0.211 | 11.6 | 20.3 | 31.9 | 53.2 | -21.3 |
| 1.590 | 4.0 | 20.2 | 24.2 | 46.0 | -21.8 |
| 1.061 | 2.5 | 20.1 | 22.6 | 46.0 | -23.4 |

CONCLUSION

Pass



Tested By

AC POWERLINE CONDUCTED EMISSIONS

| | | | |
|-------------------|--------------------|--------------------|------------|
| EUT: | X Series | Work Order: | LGPD0171 |
| Serial Number: | 1023259 | Date: | 03/03/2016 |
| Customer: | ZOLL Medical Corp. | Temperature: | 22°C |
| Attendees: | None | Relative Humidity: | 20% |
| Customer Project: | None | Bar. Pressure: | 988 mb |
| Tested By: | Jared Ison | Job Site: | MN03 |
| Power: | 15 VDC | Configuration: | LGPD0171-2 |

TEST SPECIFICATIONS

| | |
|-----------------|------------------|
| Specification: | Method: |
| FCC 15.207:2016 | ANSI C63.10:2013 |

TEST PARAMETERS

| | | | | | |
|--------|---|-------|---------------|-----------------------------|---|
| Run #: | 4 | Line: | Negative Lead | Add. Ext. Attenuation (dB): | 0 |
|--------|---|-------|---------------|-----------------------------|---|

COMMENTS

| |
|------------------------------|
| Channel 120, 5600 MHz 6 Mbps |
|------------------------------|

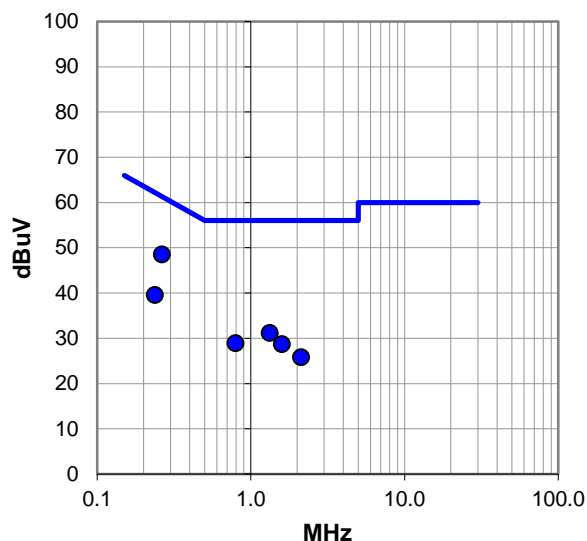
EUT OPERATING MODES

| |
|-------------------------------------|
| Continuous single channel transmit. |
|-------------------------------------|

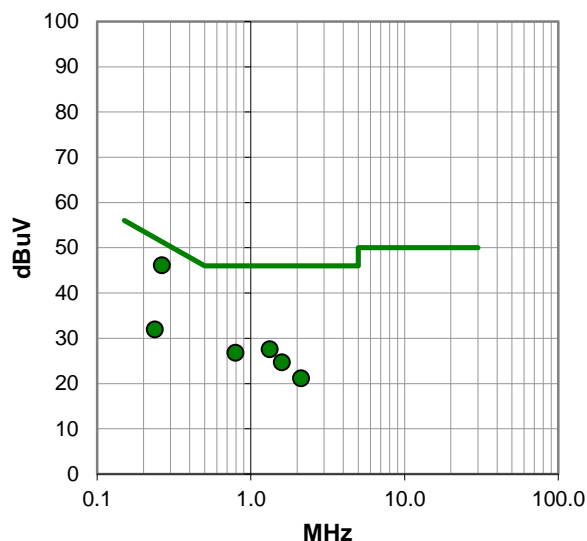
DEVIATIONS FROM TEST STANDARD

| |
|------|
| None |
|------|

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #4

Quasi Peak Data - vs - Quasi Peak Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 28.3 | 20.2 | 48.5 | 61.3 | -12.8 |
| 0.237 | 19.3 | 20.3 | 39.6 | 62.2 | -22.6 |
| 1.326 | 11.0 | 20.1 | 31.1 | 56.0 | -24.9 |
| 0.796 | 8.8 | 20.1 | 28.9 | 56.0 | -27.1 |
| 1.592 | 8.5 | 20.2 | 28.7 | 56.0 | -27.3 |
| 2.121 | 5.6 | 20.2 | 25.8 | 56.0 | -30.2 |

Average Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 25.9 | 20.2 | 46.1 | 51.3 | -5.2 |
| 1.326 | 7.4 | 20.1 | 27.5 | 46.0 | -18.5 |
| 0.796 | 6.7 | 20.1 | 26.8 | 46.0 | -19.2 |
| 0.237 | 11.7 | 20.3 | 32.0 | 52.2 | -20.2 |
| 1.592 | 4.5 | 20.2 | 24.7 | 46.0 | -21.3 |
| 2.121 | 0.9 | 20.2 | 21.1 | 46.0 | -24.9 |

CONCLUSION

Pass



Tested By

AC POWERLINE CONDUCTED EMISSIONS

| | | | |
|-------------------|--------------------|--------------------|------------|
| EUT: | X Series | Work Order: | LGPD0171 |
| Serial Number: | 1023259 | Date: | 03/03/2016 |
| Customer: | ZOLL Medical Corp. | Temperature: | 22°C |
| Attendees: | None | Relative Humidity: | 20% |
| Customer Project: | None | Bar. Pressure: | 988 mb |
| Tested By: | Jared Ison | Job Site: | MN03 |
| Power: | 15 VDC | Configuration: | LGPD0171-2 |

TEST SPECIFICATIONS

| | |
|-----------------|------------------|
| Specification: | Method: |
| FCC 15.207:2016 | ANSI C63.10:2013 |

TEST PARAMETERS

| | | | | | |
|--------|---|-------|---------------|-----------------------------|---|
| Run #: | 5 | Line: | Negative Lead | Add. Ext. Attenuation (dB): | 0 |
|--------|---|-------|---------------|-----------------------------|---|

COMMENTS

| |
|------------------------------|
| Channel 157, 5785 MHz 6 Mbps |
|------------------------------|

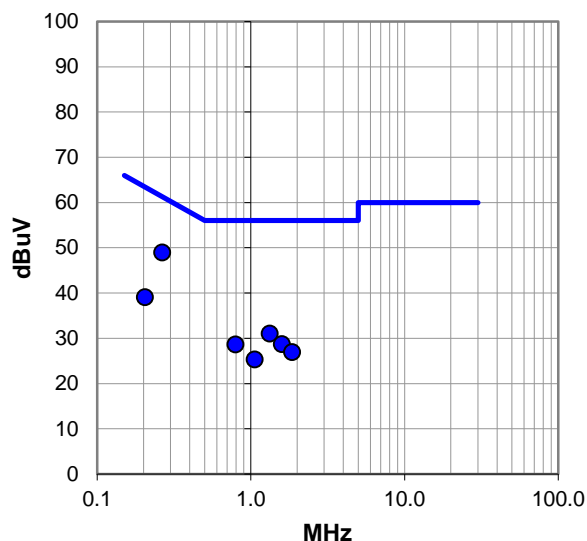
EUT OPERATING MODES

| |
|-------------------------------------|
| Continuous single channel transmit. |
|-------------------------------------|

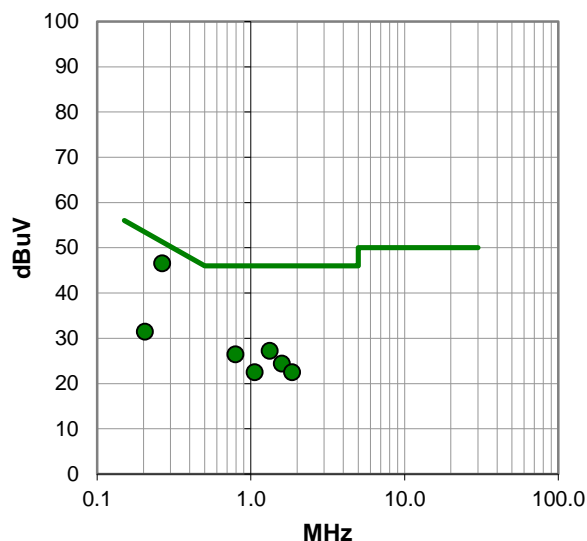
DEVIATIONS FROM TEST STANDARD

| |
|------|
| None |
|------|

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #5

Quasi Peak Data - vs - Quasi Peak Limit

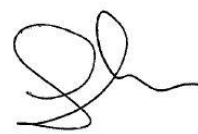
| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 28.7 | 20.2 | 48.9 | 61.3 | -12.3 |
| 0.205 | 18.8 | 20.3 | 39.1 | 63.4 | -24.3 |
| 1.325 | 10.9 | 20.1 | 31.0 | 56.0 | -25.0 |
| 1.591 | 8.5 | 20.2 | 28.7 | 56.0 | -27.3 |
| 0.797 | 8.5 | 20.1 | 28.6 | 56.0 | -27.4 |
| 1.856 | 6.7 | 20.2 | 26.9 | 56.0 | -29.1 |
| 1.060 | 5.2 | 20.1 | 25.3 | 56.0 | -30.7 |

Average Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 26.3 | 20.2 | 46.5 | 51.3 | -4.7 |
| 1.325 | 7.1 | 20.1 | 27.2 | 46.0 | -18.8 |
| 0.797 | 6.3 | 20.1 | 26.4 | 46.0 | -19.6 |
| 1.591 | 4.2 | 20.2 | 24.4 | 46.0 | -21.6 |
| 0.205 | 11.2 | 20.3 | 31.5 | 53.4 | -21.9 |
| 1.060 | 2.4 | 20.1 | 22.5 | 46.0 | -23.5 |
| 1.856 | 2.3 | 20.2 | 22.5 | 46.0 | -23.5 |

CONCLUSION

Pass



Tested By

AC POWERLINE CONDUCTED EMISSIONS

| | | | |
|-------------------|--------------------|--------------------|------------|
| EUT: | X Series | Work Order: | LGPD0171 |
| Serial Number: | 1023259 | Date: | 03/03/2016 |
| Customer: | ZOLL Medical Corp. | Temperature: | 22°C |
| Attendees: | None | Relative Humidity: | 20% |
| Customer Project: | None | Bar. Pressure: | 988 mb |
| Tested By: | Jared Ison | Job Site: | MN03 |
| Power: | 15 VDC | Configuration: | LGPD0171-2 |

TEST SPECIFICATIONS

| | |
|-----------------|------------------|
| Specification: | Method: |
| FCC 15.207:2016 | ANSI C63.10:2013 |

TEST PARAMETERS

| | | | | | |
|--------|---|-------|---------------|-----------------------------|---|
| Run #: | 6 | Line: | Positive Lead | Add. Ext. Attenuation (dB): | 0 |
|--------|---|-------|---------------|-----------------------------|---|

COMMENTS

| |
|------------------------------|
| Channel 157, 5785 MHz 6 Mbps |
|------------------------------|

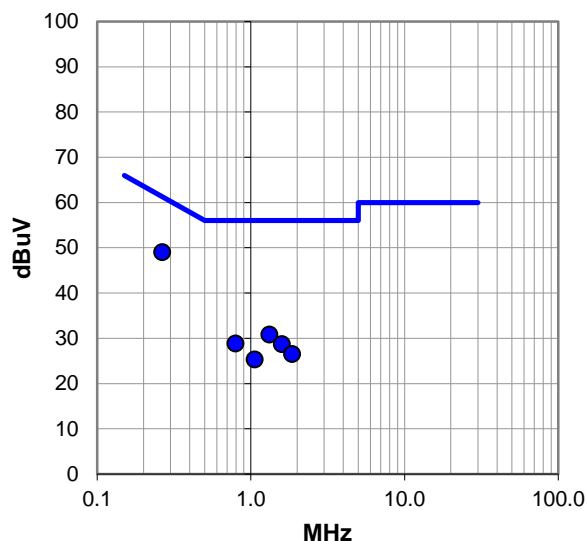
EUT OPERATING MODES

| |
|-------------------------------------|
| Continuous single channel transmit. |
|-------------------------------------|

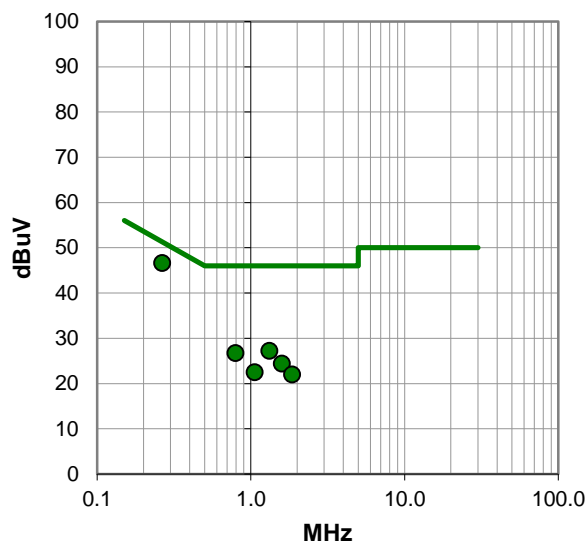
DEVIATIONS FROM TEST STANDARD

| |
|------|
| None |
|------|

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #6

Quasi Peak Data - vs - Quasi Peak Limit

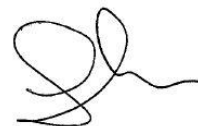
| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 28.8 | 20.2 | 49.0 | 61.3 | -12.2 |
| 1.325 | 10.7 | 20.1 | 30.8 | 56.0 | -25.2 |
| 0.796 | 8.7 | 20.1 | 28.8 | 56.0 | -27.2 |
| 1.590 | 8.5 | 20.2 | 28.7 | 56.0 | -27.3 |
| 1.854 | 6.3 | 20.2 | 26.5 | 56.0 | -29.5 |
| 1.060 | 5.2 | 20.1 | 25.3 | 56.0 | -30.7 |

Average Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.265 | 26.4 | 20.2 | 46.6 | 51.3 | -4.6 |
| 1.325 | 7.1 | 20.1 | 27.2 | 46.0 | -18.8 |
| 0.796 | 6.6 | 20.1 | 26.7 | 46.0 | -19.3 |
| 1.590 | 4.2 | 20.2 | 24.4 | 46.0 | -21.6 |
| 1.060 | 2.4 | 20.1 | 22.5 | 46.0 | -23.5 |
| 1.854 | 1.8 | 20.2 | 22.0 | 46.0 | -24.0 |

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

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

CHANNELS OF OPERATION

| |
|---------------|
| 36, 5180 MHz |
| 48, 5240 MHz |
| 52, 5260 MHz |
| 64, 5320 MHz |
| 100, 5500 MHz |
| 120, 5600 MHz |
| 140, 5700 MHz |
| 149, 5745 MHz |
| 157, 5785 MHz |
| 165, 5825 MHz |

MODULATION OF OPERATION

| |
|---------|
| 6 Mbps |
| 36 Mbps |
| 54 Mbps |
| MCS0 |
| MCS7 |

POWER SETTINGS INVESTIGATED

| |
|--------|
| 15 VDC |
|--------|

CONFIGURATIONS INVESTIGATED

| |
|--------------|
| LGPD0171 - 2 |
|--------------|

FREQUENCY RANGE INVESTIGATED

| | | | |
|-----------------|--------|----------------|-----------|
| Start Frequency | 30 MHz | Stop Frequency | 40000 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 (mo) |
|------------------------------|-----------------|-----------------------------------|-----|------------|---------------|
| Cable | ESM Cable Corp. | TTBJ141 KMKM-72 | MNO | 7/6/2015 | 12 |
| Cable | Northwest EMC | TTBJ141-KMKM-72 | MNQ | 9/18/2015 | 12 |
| Amplifier - Pre-Amplifier | Miteq | JSW45-26004000-40-5P | AVN | 9/18/2015 | 12 |
| Antenna - Standard Gain | ETS Lindgren | 3160-10 | AIC | NCR | 0 |
| Amplifier - Pre-Amplifier | Miteq | JSD4-18002600-26-8P | APU | 9/18/2015 | 12 |
| Cable | Northwest EMC | 18-26GHz Standard Gain Horn Cable | MNP | 9/18/2015 | 12 |
| Antenna - Standard Gain | ETS Lindgren | 3160-09 | AHG | NCR | 0 |
| Antenna - Double Ridge | ETS Lindgren | 3115 | AIB | 8/12/2014 | 24 |
| Generator - Signal | Agilent | N5183A | TIK | 10/17/2014 | 36 |
| Power Sensor | Agilent | N8481A | SQN | 8/17/2015 | 12 |
| Meter - Power | Agilent | N1913A | SQL | 8/17/2015 | 12 |
| Filter - Band Pass/Notch | Micro-Tronics | BRC50705 | LFH | 10/21/2015 | 12 |
| Filter - Band Pass/Notch | Micro-Tronics | BRC50704 | LFH | 10/21/2015 | 12 |
| Filter - Band Pass/Notch | Micro-Tronics | BRC50703 | LFG | 10/21/2015 | 12 |
| Amplifier - Pre-Amplifier | Miteq | AM-1616-1000 | AVO | 12/10/2015 | 12 |
| Cable | ESM Cable Corp. | Bilog Cables | MNH | 12/7/2015 | 12 |
| Amplifier - Pre-Amplifier | Miteq | AMF-6F-12001800-30-10P | AVW | 3/2/2015 | 12 |
| Cable | ESM Cable Corp. | Standard Gain Horn Cables | MNJ | 12/7/2015 | 12 |
| Antenna - Standard Gain | ETS Lindgren | 3160-08 | AIQ | NCR | 0 |
| Amplifier - Pre-Amplifier | Miteq | AMF-6F-08001200-30-10P | AVV | 3/2/2015 | 12 |
| Cable | ESM Cable Corp. | TTBJ141 KMKM-72 | MNU | 9/18/2015 | 12 |
| Antenna - Biconilog | Teseq | CBL 6141B | AYD | 1/6/2016 | 24 |
| Amplifier - Pre-Amplifier | Miteq | AMF-3D-00100800-32-13P | AVT | 3/10/2015 | 12 |
| Cable | ESM Cable Corp. | Double Ridge Guide Horn Cables | MNI | 12/7/2015 | 12 |
| Antenna - Standard Gain | ETS Lindgren | 3160-07 | AXP | NCR | 0 |
| Antenna - Double Ridge | ETS Lindgren | 3115 | AJA | 6/3/2014 | 24 |
| Analyzer - Spectrum Analyzer | Agilent | N9010A | AFI | 1/27/2016 | 12 |


MEASUREMENT BANDWIDTHS

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

TEST DESCRIPTION

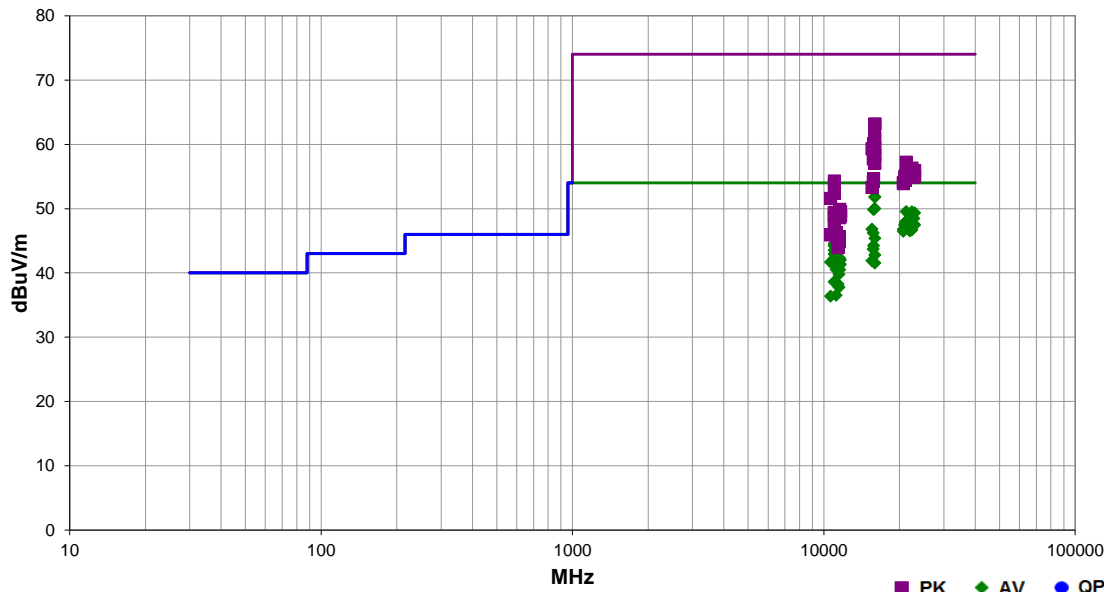
The highest gain antenna of each type to be used with the EUT were tested. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. Measurements were made to satisfy the three requirements of 47 CFR 15.407: Field strength under 1GHz, Restricted Bands of 47 CFR 15.205, and EIRP of 47 CFR 15.407.

While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.10:2009). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

| | | | | |
|-----------------------|--------------------|-------------------|------------|--|
| Work Order: | LGPD0171 | Date: | 02/25/16 |  |
| Project: | None | Temperature: | 23.2 °C | |
| Job Site: | MN05 | Humidity: | 20.2% RH | |
| Serial Number: | 1023259 | Barometric Pres.: | 993.7 mbar | |
| Tested by: Jared Ison | | | | |
| EUT: | X Series | | | |
| Configuration: | 2 | | | |
| Customer: | ZOLL Medical Corp. | | | |
| Attendees: | None | | | |
| EUT Power: | 15 VDC | | | |
| Operating Mode: | Transmitting. | | | |
| Deviations: | None | | | |
| Comments: | None | | | |


| Test Specifications | Test Method |
|---------------------|------------------|
| FCC 15.407:2016 | ANSI C63.10:2013 |

| Run # | 30 | Test Distance (m) | 3 | Antenna Height(s) | 1 to 4(m) | Results | Pass |
|-------|----|-------------------|---|-------------------|-----------|---------|------|
|-------|----|-------------------|---|-------------------|-----------|---------|------|



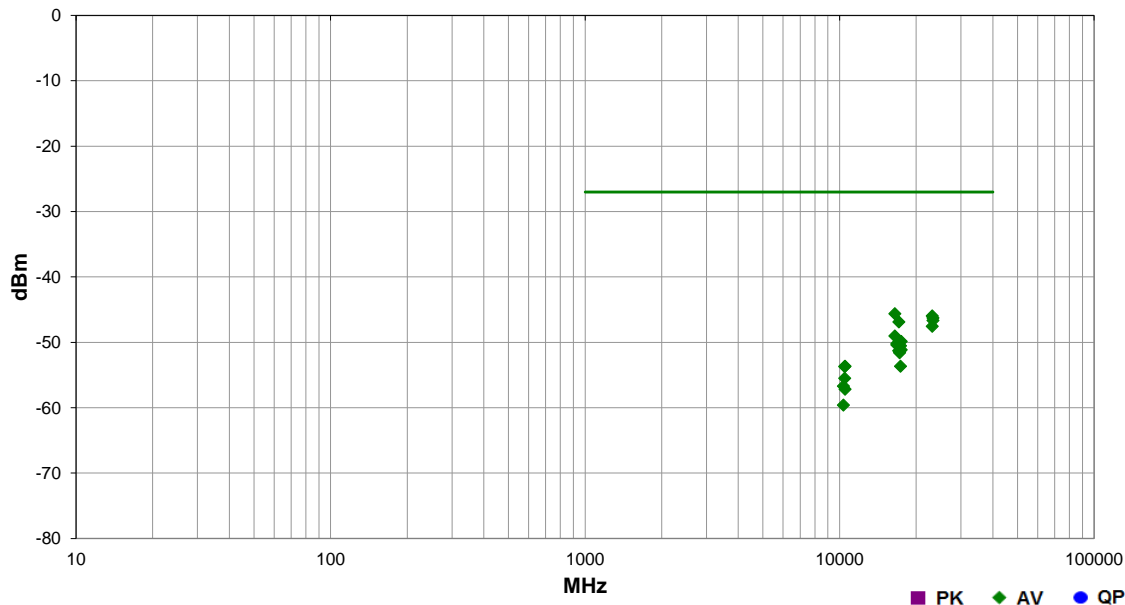
| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments |
|------------|------------------|-------------|-------------------------|-------------------|------------------------|---------------------------|--------------------------|----------|--------------------------|-------------------|----------------------|------------------------|-------------------------------------|
| 15958.670 | 41.4 | 10.4 | 1.1 | 312.9 | 3.0 | 0.0 | Horz | AV | 0.0 | 51.8 | 54.0 | -2.2 | Ch 64, 5320 MHz 6 Mbps: EUT Vert |
| 15957.670 | 41.4 | 10.4 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 51.8 | 54.0 | -2.2 | Ch 64, 5320 MHz MCS0: EUT Vert |
| 15958.870 | 39.6 | 10.4 | 2.4 | 75.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 50.0 | 54.0 | -4.0 | Ch 64, 5320 MHz 6 Mbps: EUT On Side |
| 15782.470 | 40.4 | 9.4 | 1.1 | 297.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 49.8 | 54.0 | -4.2 | Ch 52, 5260 MHz 6 Mbps: EUT Vert |
| 21280.060 | 36.4 | 13.1 | 1.6 | 342.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 49.5 | 54.0 | -4.5 | Ch. 64 5320 6 Mbps: EUT Vert |
| 22400.020 | 35.9 | 13.6 | 1.6 | 328.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 49.5 | 54.0 | -4.5 | Ch. 120 5600 6 Mbps: EUT Vert |
| 22980.070 | 35.4 | 14.0 | 1.6 | 76.1 | 3.0 | 0.0 | Horz | AV | 0.0 | 49.4 | 54.0 | -4.6 | Ch. 149 5745 6 Mbps: EUT Vert |
| 22000.000 | 35.1 | 13.4 | 1.6 | 20.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 48.5 | 54.0 | -5.5 | Ch. 100 5500 6 Mbps: EUT On Side |
| 22800.020 | 34.7 | 13.8 | 1.6 | 329.9 | 3.0 | 0.0 | Horz | AV | 0.0 | 48.5 | 54.0 | -5.5 | Ch. 140 5700 6 Mbps: EUT Vert |
| 21280.020 | 34.9 | 13.1 | 1.6 | 45.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 48.0 | 54.0 | -6.0 | Ch. 64 5320 6 Mbps: EUT On Side |
| 21040.010 | 34.7 | 13.1 | 1.6 | 339.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 47.8 | 54.0 | -6.2 | Ch. 52 5260 6 Mbps: EUT Vert |
| 22800.020 | 33.8 | 13.8 | 1.6 | 311.9 | 3.0 | 0.0 | Vert | AV | 0.0 | 47.6 | 54.0 | -6.4 | Ch. 140 5700 6 Mbps: EUT On Side |
| 20960.030 | 34.4 | 13.1 | 1.6 | 65.1 | 3.0 | 0.0 | Horz | AV | 0.0 | 47.5 | 54.0 | -6.5 | Ch. 48 5240 6 Mbps: EUT Vert |
| 22980.070 | 33.5 | 14.0 | 1.6 | 315.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 47.5 | 54.0 | -6.5 | Ch. 149 5745 6 Mbps: EUT On Side |
| 21040.040 | 33.7 | 13.1 | 1.6 | 51.1 | 3.0 | 0.0 | Vert | AV | 0.0 | 46.8 | 54.0 | -7.2 | Ch. 52 5260 6 Mbps: EUT On Side |
| 15541.330 | 37.5 | 9.3 | 1.1 | 300.9 | 3.0 | 0.0 | Horz | AV | 0.0 | 46.8 | 54.0 | -7.2 | Ch 36, 5180 MHz 6 Mbps: EUT Vert |
| 20960.020 | 33.7 | 13.1 | 1.6 | 45.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 46.8 | 54.0 | -7.2 | Ch. 48 5240 6 Mbps: EUT On Side |
| 20720.020 | 33.8 | 13.0 | 1.6 | 330.9 | 3.0 | 0.0 | Horz | AV | 0.0 | 46.8 | 54.0 | -7.2 | Ch. 36 5180 6 Mbps: EUT Vert |
| 22400.060 | 33.1 | 13.6 | 1.6 | 31.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 46.7 | 54.0 | -7.3 | Ch. 120 5600 6 Mbps: EUT On Side |
| 21999.980 | 33.1 | 13.4 | 1.6 | 10.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 46.5 | 54.0 | -7.5 | Ch. 100 5500 6 Mbps: EUT Vert |
| 20719.990 | 33.5 | 13.0 | 1.6 | 80.1 | 3.0 | 0.0 | Vert | AV | 0.0 | 46.5 | 54.0 | -7.5 | Ch. 36 5180 6 Mbps: EUT On Side |
| 15721.470 | 36.9 | 9.3 | 1.0 | 297.9 | 3.0 | 0.0 | Horz | AV | 0.0 | 46.2 | 54.0 | -7.8 | Ch 48, 5240 MHz 6 Mbps: EUT Vert |
| 15962.670 | 34.9 | 10.5 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 45.4 | 54.0 | -8.6 | Ch 64, 5320 MHz 36 Mbps: EUT Vert |
| 10999.960 | 47.8 | -3.3 | 1.8 | 303.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 44.5 | 54.0 | -9.5 | Ch 100, 5500 MHz 6 Mbps: On Side |
| 15782.600 | 34.8 | 9.4 | 1.0 | 113.1 | 3.0 | 0.0 | Vert | AV | 0.0 | 44.2 | 54.0 | -9.8 | Ch 52, 5260 MHz 6 Mbps: EUT On Side |
| 10999.930 | 47.5 | -3.3 | 1.0 | 329.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 44.2 | 54.0 | -9.8 | Ch 100, 5500 MHz 6 Mbps: Vert |
| 15719.370 | 34.4 | 9.3 | 2.6 | 32.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 43.7 | 54.0 | -10.3 | Ch 48, 5240 MHz 6 Mbps: EUT On Side |
| 11000.040 | 46.8 | -3.3 | 2.8 | 317.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 43.5 | 54.0 | -10.5 | Ch 100, 5500 MHz 6 Mbps: EUT Horz |

| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/ Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments |
|------------|------------------|-------------|-------------------------|-------------------|------------------------|---------------------------|---------------------------|----------|--------------------------|-------------------|----------------------|------------------------|-------------------------------------|
| 15955.030 | 52.8 | 10.4 | 1.1 | 312.9 | 3.0 | 0.0 | Horz | PK | 0.0 | 63.2 | 74.0 | -10.8 | Ch 64, 5320 MHz 6 Mbps: EUT Vert |
| 15954.070 | 52.8 | 10.3 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 63.1 | 74.0 | -10.9 | Ch 64, 5320 MHz MCS0: EUT Vert |
| 11000.110 | 46.2 | -3.3 | 1.8 | 58.1 | 3.0 | 0.0 | Horz | AV | 0.0 | 42.9 | 54.0 | -11.1 | Ch 100, 5500 MHz 6 Mbps: On Side |
| 15957.170 | 32.4 | 10.4 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 42.8 | 54.0 | -11.2 | Ch 64, 5320 MHz 54 Mbps: EUT Vert |
| 11569.960 | 44.4 | -2.1 | 1.0 | 335.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 42.3 | 54.0 | -11.7 | Ch 157, 5785 MHz 6 Mbps: EUT |
| 11000.000 | 45.5 | -3.3 | 3.2 | 110.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 42.2 | 54.0 | -11.8 | Ch 100, 5500 MHz 6 Mbps: EUT Horz |
| 11650.040 | 44.4 | -2.4 | 1.3 | 336.9 | 3.0 | 0.0 | Vert | AV | 0.0 | 42.0 | 54.0 | -12.0 | Ch 165, 5825 MHz 6 Mbps: On Side |
| 15540.630 | 32.6 | 9.3 | 1.0 | 109.1 | 3.0 | 0.0 | Vert | AV | 0.0 | 41.9 | 54.0 | -12.1 | Ch 36, 5180 MHz 6 Mbps: EUT On Side |
| 10639.930 | 45.2 | -3.5 | 1.0 | 344.9 | 3.0 | 0.0 | Horz | AV | 0.0 | 41.7 | 54.0 | -12.3 | Ch 64, 5320 MHz 6 Mbps: Vert |
| 15960.030 | 31.1 | 10.4 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 41.5 | 54.0 | -12.5 | Ch 64, 5320 MHz MCS7: EUT Vert |
| 11650.000 | 43.7 | -2.4 | 1.0 | 336.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 41.3 | 54.0 | -12.7 | Ch 165, 5825 MHz 6 Mbps: Vert |
| 15957.970 | 50.6 | 10.4 | 2.4 | 75.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 61.0 | 74.0 | -13.0 | Ch 64, 5320 MHz 6 Mbps: EUT On Side |
| 11200.000 | 44.1 | -3.6 | 1.2 | 20.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 40.5 | 54.0 | -13.5 | Ch 120, 5600 MHz 6 Mbps: Vert |
| 11570.040 | 42.6 | -2.1 | 1.0 | 333.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 40.5 | 54.0 | -13.5 | Ch 157, 5785 MHz 6 Mbps: On Side |
| 11400.000 | 44.0 | -3.7 | 1.4 | 27.0 | 3.0 | 0.0 | Horz | AV | 0.0 | 40.3 | 54.0 | -13.7 | Ch 140, 5700 MHz 6 Mbps: Vert |
| 15782.930 | 50.7 | 9.4 | 1.1 | 297.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 60.1 | 74.0 | -13.9 | Ch 52, 5260 MHz 6 Mbps: EUT Vert |
| 11490.000 | 42.8 | -3.0 | 1.1 | 337.9 | 3.0 | 0.0 | Horz | AV | 0.0 | 39.8 | 54.0 | -14.2 | Ch 149, 5745 MHz 6 Mbps: Vert |
| 15963.630 | 48.9 | 10.5 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 59.4 | 74.0 | -14.6 | Ch 64, 5320 MHz 36 Mbps: EUT Vert |
| 15541.870 | 50.0 | 9.3 | 1.1 | 300.9 | 3.0 | 0.0 | Horz | PK | 0.0 | 59.3 | 74.0 | -14.7 | Ch 36, 5180 MHz 6 Mbps: EUT Vert |
| 11000.220 | 41.9 | -3.3 | 1.0 | 46.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 38.6 | 54.0 | -15.4 | Ch 100, 5500 MHz 6 Mbps: Vert |
| 15966.030 | 47.8 | 10.5 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 58.3 | 74.0 | -15.7 | Ch 64, 5320 MHz 54 Mbps: EUT Vert |
| 11400.040 | 41.9 | -3.7 | 1.2 | 344.9 | 3.0 | 0.0 | Vert | AV | 0.0 | 38.2 | 54.0 | -15.8 | Ch 140, 5700 MHz 6 Mbps: On Side |
| 11489.960 | 40.8 | -3.0 | 1.3 | 336.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 37.8 | 54.0 | -16.2 | Ch 149, 5745 MHz 6 Mbps: On Side |
| 15727.730 | 48.4 | 9.3 | 1.0 | 297.9 | 3.0 | 0.0 | Horz | PK | 0.0 | 57.7 | 74.0 | -16.3 | Ch 48, 5240 MHz 6 Mbps: EUT Vert |
| 21280.140 | 44.1 | 13.1 | 1.6 | 342.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 57.2 | 74.0 | -16.8 | Ch. 64 5320 6 Mbps: EUT Vert |
| 15962.500 | 46.6 | 10.5 | 1.0 | 300.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 57.1 | 74.0 | -16.9 | Ch 64, 5320 MHz MCS7: EUT Vert |
| 11200.070 | 40.1 | -3.6 | 1.0 | 360.0 | 3.0 | 0.0 | Vert | AV | 0.0 | 36.5 | 54.0 | -17.5 | Ch 120, 5600 MHz 6 Mbps: On Side |
| 10640.040 | 39.9 | -3.5 | 1.0 | 312.9 | 3.0 | 0.0 | Vert | AV | 0.0 | 36.4 | 54.0 | -17.6 | Ch 64, 5320 MHz 6 Mbps: On Side |
| 22399.980 | 42.7 | 13.6 | 1.6 | 328.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 56.3 | 74.0 | -17.7 | Ch. 120 5600 6 Mbps: EUT Vert |
| 22799.880 | 42.1 | 13.8 | 1.6 | 311.9 | 3.0 | 0.0 | Vert | PK | 0.0 | 55.9 | 74.0 | -18.1 | Ch. 140 5700 6 Mbps: EUT On Side |
| 22980.000 | 41.9 | 14.0 | 1.6 | 76.1 | 3.0 | 0.0 | Horz | PK | 0.0 | 55.9 | 74.0 | -18.1 | Ch. 149 5745 6 Mbps: EUT Vert |
| 22799.810 | 42.0 | 13.8 | 1.6 | 329.9 | 3.0 | 0.0 | Horz | PK | 0.0 | 55.8 | 74.0 | -18.2 | Ch. 140 5700 6 Mbps: EUT Vert |
| 21279.800 | 42.3 | 13.1 | 1.6 | 45.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 55.4 | 74.0 | -18.6 | Ch. 64 5320 6 Mbps: EUT On Side |
| 22000.110 | 42.0 | 13.4 | 1.6 | 10.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 55.4 | 74.0 | -18.6 | Ch. 100 5500 6 Mbps: EUT Vert |
| 22000.080 | 41.9 | 13.4 | 1.6 | 20.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 55.3 | 74.0 | -18.7 | Ch. 100 5500 6 Mbps: EUT On Side |
| 21040.230 | 42.0 | 13.1 | 1.6 | 339.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 55.1 | 74.0 | -18.9 | Ch. 52 5260 6 Mbps: EUT Vert |
| 22980.060 | 41.0 | 14.0 | 1.6 | 315.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 55.0 | 74.0 | -19.0 | Ch. 149 5745 6 Mbps: EUT On Side |
| 22400.280 | 41.3 | 13.6 | 1.6 | 31.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 54.9 | 74.0 | -19.1 | Ch. 120 5600 6 Mbps: EUT On Side |
| 20960.180 | 41.8 | 13.1 | 1.6 | 65.1 | 3.0 | 0.0 | Horz | PK | 0.0 | 54.9 | 74.0 | -19.1 | Ch. 48 5240 6 Mbps: EUT Vert |
| 15780.100 | 45.2 | 9.4 | 1.0 | 113.1 | 3.0 | 0.0 | Vert | PK | 0.0 | 54.6 | 74.0 | -19.4 | Ch 52, 5260 MHz 6 Mbps: EUT On Side |
| 21039.650 | 41.3 | 13.1 | 1.6 | 51.1 | 3.0 | 0.0 | Vert | PK | 0.0 | 54.4 | 74.0 | -19.6 | Ch. 52 5260 6 Mbps: EUT On Side |
| 20959.900 | 41.3 | 13.1 | 1.6 | 45.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 54.4 | 74.0 | -19.6 | Ch. 48 5240 6 Mbps: EUT On Side |
| 11002.350 | 57.6 | -3.3 | 1.8 | 303.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 54.3 | 74.0 | -19.7 | Ch 100, 5500 MHz 6 Mbps: On Side |
| 15723.200 | 44.9 | 9.3 | 2.6 | 32.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 54.2 | 74.0 | -19.8 | Ch 48, 5240 MHz 6 Mbps: EUT On Side |
| 20720.040 | 41.1 | 13.0 | 1.6 | 80.1 | 3.0 | 0.0 | Vert | PK | 0.0 | 54.1 | 74.0 | -19.9 | Ch. 36 5180 6 Mbps: EUT On Side |
| 11000.990 | 57.2 | -3.3 | 1.0 | 329.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 53.9 | 74.0 | -20.1 | Ch 100, 5500 MHz 6 Mbps: Vert |
| 20719.800 | 40.9 | 13.0 | 1.6 | 330.9 | 3.0 | 0.0 | Horz | PK | 0.0 | 53.9 | 74.0 | -20.1 | Ch. 36 5180 6 Mbps: EUT Vert |
| 15541.470 | 44.0 | 9.3 | 1.0 | 109.1 | 3.0 | 0.0 | Vert | PK | 0.0 | 53.3 | 74.0 | -20.7 | Ch 36, 5180 MHz 6 Mbps: EUT On Side |
| 11001.470 | 55.7 | -3.3 | 2.8 | 317.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 52.4 | 74.0 | -21.6 | Ch 100, 5500 MHz 6 Mbps: EUT Horz |
| 10642.900 | 55.1 | -3.5 | 1.0 | 344.9 | 3.0 | 0.0 | Horz | PK | 0.0 | 51.6 | 74.0 | -22.4 | Ch 64, 5320 MHz 6 Mbps: Vert |
| 11569.560 | 52.0 | -2.1 | 1.0 | 335.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 49.9 | 74.0 | -24.1 | Ch 157, 5785 MHz 6 Mbps: Vert |
| 11651.170 | 51.9 | -2.4 | 1.0 | 336.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 49.5 | 74.0 | -24.5 | Ch 165, 5825 MHz 6 Mbps: Vert |
| 10999.380 | 52.7 | -3.3 | 1.8 | 58.1 | 3.0 | 0.0 | Horz | PK | 0.0 | 49.4 | 74.0 | -24.6 | Ch 100, 5500 MHz 6 Mbps: On Side |
| 11000.150 | 52.2 | -3.3 | 3.2 | 110.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 48.9 | 74.0 | -25.1 | Ch 100, 5500 MHz 6 Mbps: EUT Horz |
| 11653.700 | 51.3 | -2.4 | 1.3 | 336.9 | 3.0 | 0.0 | Vert | PK | 0.0 | 48.9 | 74.0 | -25.1 | Ch 165, 5825 MHz 6 Mbps: On Side |
| 11569.930 | 50.7 | -2.1 | 1.0 | 333.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 48.6 | 74.0 | -25.4 | Ch 157, 5785 MHz 6 Mbps: On Side |
| 11000.180 | 50.7 | -3.3 | 1.0 | 46.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 47.4 | 74.0 | -26.6 | Ch 100, 5500 MHz 6 Mbps: Vert |
| 11200.260 | 49.8 | -3.6 | 1.0 | 360.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 46.2 | 74.0 | -27.8 | Ch 120, 5600 MHz 6 Mbps: On Side |
| 10642.640 | 49.4 | -3.5 | 1.0 | 312.9 | 3.0 | 0.0 | Vert | PK | 0.0 | 45.9 | 74.0 | -28.1 | Ch 64, 5320 MHz 6 Mbps: On Side |
| 11201.280 | 49.3 | -3.6 | 1.2 | 20.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 45.7 | 74.0 | -28.3 | Ch 120, 5600 MHz 6 Mbps: Vert |
| 11489.520 | 48.7 | -3.0 | 1.1 | 337.9 | 3.0 | 0.0 | Horz | PK | 0.0 | 45.7 | 74.0 | -28.3 | Ch 149, 5745 MHz 6 Mbps: Vert |
| 11399.930 | 48.8 | -3.7 | 1.4 | 27.0 | 3.0 | 0.0 | Horz | PK | 0.0 | 45.1 | 74.0 | -28.9 | Ch 140, 5700 MHz 6 Mbps: Vert |
| 11489.850 | 47.9 | -3.0 | 1.3 | 336.0 | 3.0 | 0.0 | Vert | PK | 0.0 | 44.9 | 74.0 | -29.1 | Ch 149, 5745 MHz 6 Mbps: On Side |
| 11399.850 | 47.6 | -3.7 | 1.2 | 344.9 | 3.0 | 0.0 | Vert | PK | 0.0 | 43.9 | 74.0 | -30.1 | Ch 140, 5700 MHz 6 Mbps: On Side |


| | | | | |
|-----------------|---|-------------------|------------|--|
| Work Order: | LGPD0171 | Date: | 02/25/16 |  |
| Project: | None | Temperature: | 23.2 °C | |
| Job Site: | MN05 | Humidity: | 20.2% RH | |
| Serial Number: | 1023259 | Barometric Pres.: | 993.7 mbar | |
| EUT: | X Series | | | |
| Configuration: | 2 | | | |
| Customer: | ZOLL Medical Corp. | | | |
| Attendees: | None | | | |
| EUT Power: | 15 VDC | | | |
| Operating Mode: | Continuous single channel transmission using a modulated carrier. | | | |
| Deviations: | None | | | |
| Comments: | None | | | |

| Test Specifications | Test Method |
|---------------------|------------------|
| FCC 15.407:2016 | ANSI C63.10:2013 |

| Run # | 31 | Test Distance (m) | 3 | Antenna Height(s) | 1 to 4(m) | Results | Pass |
|-------|----|-------------------|---|-------------------|-----------|---------|------|
|-------|----|-------------------|---|-------------------|-----------|---------|------|

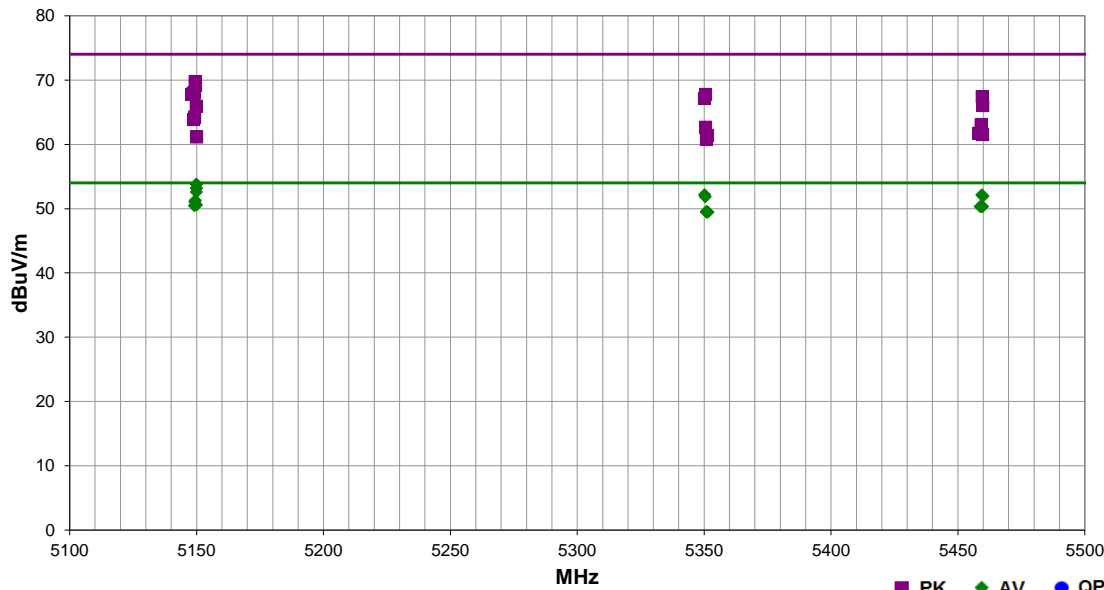


| | Freq (MHz) | Antenna Height (meters) | Azimuth (degrees) | Polarity/Transducer Type | Detector | EIRP (Watts) | EIRP (dBm) | Spec. Limit (dBm) | Compared to Spec. (dB) | Comments |
|--|------------|-------------------------|-------------------|--------------------------|----------|--------------|------------|-------------------|------------------------|--------------------------------------|
| | 16497.830 | 1.0 | 85.0 | Horz | AV | 2.73E-08 | -45.6 | -27.0 | -18.6 | Ch 100, 5500 MHz 6 Mbps: EUT Vert |
| | 23140.060 | 1.6 | 75.0 | Horz | AV | 2.53E-08 | -46.0 | -27.0 | -19.0 | Ch. 157 5785 6 Mbps: EUT Vert |
| | 23300.050 | 1.6 | 350.0 | Vert | AV | 2.36E-08 | -46.3 | -27.0 | -19.3 | Ch. 165 5825 6 Mbps: EUT On Side |
| | 23299.990 | 1.6 | 79.0 | Horz | AV | 2.15E-08 | -46.7 | -27.0 | -19.7 | Ch. 165 5825 6 Mbps: EUT Vert |
| | 17097.570 | 2.2 | 63.0 | Horz | AV | 2.05E-08 | -46.9 | -27.0 | -19.9 | Ch 140, 5700 MHz 6 Mbps: EUT Vert |
| | 23140.030 | 1.6 | 347.0 | Vert | AV | 1.75E-08 | -47.6 | -27.0 | -20.6 | Ch. 157 5785 6 Mbps: EUT On Side |
| | 16498.400 | 2.4 | 77.1 | Vert | AV | 1.25E-08 | -49.0 | -27.0 | -22.0 | Ch 100, 5500 MHz 6 Mbps: EUT On Side |
| | 17475.830 | 1.0 | 79.0 | Horz | AV | 1.03E-08 | -49.9 | -27.0 | -22.9 | Ch 165, 5825 MHz 6 Mbps: EUT Vert |
| | 16799.970 | 1.0 | 52.1 | Horz | AV | 9.52E-09 | -50.2 | -27.0 | -23.2 | Ch 120, 5600 MHz 6 Mbps: EUT Vert |
| | 16798.870 | 1.0 | 81.0 | Vert | AV | 9.14E-09 | -50.4 | -27.0 | -23.4 | Ch 120, 5600 MHz 6 Mbps: EUT On Side |
| | 17356.270 | 1.1 | 72.0 | Horz | AV | 8.83E-09 | -50.5 | -27.0 | -23.5 | Ch 157, 5785 MHz 6 Mbps: EUT Vert |
| | 17474.900 | 1.1 | 12.1 | Vert | AV | 7.66E-09 | -51.2 | -27.0 | -24.2 | Ch 165, 5825 MHz 6 Mbps: EUT On Side |
| | 17095.930 | 1.5 | 301.9 | Vert | AV | 7.43E-09 | -51.3 | -27.0 | -24.3 | Ch 140, 5700 MHz 6 Mbps: EUT On Side |
| | 17234.970 | 1.2 | 1.1 | Vert | AV | 7.21E-09 | -51.4 | -27.0 | -24.4 | Ch 149, 5745 MHz 6 Mbps: EUT On Side |
| | 17233.770 | 1.0 | 74.0 | Horz | AV | 6.92E-09 | -51.6 | -27.0 | -24.6 | Ch 149, 5745 MHz 6 Mbps: EUT Vert |
| | 17358.000 | 1.0 | 300.9 | Vert | AV | 4.30E-09 | -53.7 | -27.0 | -26.7 | Ch 157, 5785 MHz 6 Mbps: EUT On Side |
| | 10519.780 | 1.0 | 31.0 | Horz | AV | 4.29E-09 | -53.7 | -27.0 | -26.7 | Ch 52, 5260 MHz 6 Mbps: Vert |
| | 10480.040 | 1.0 | 35.0 | Horz | AV | 4.25E-09 | -53.7 | -27.0 | -26.7 | Ch 48, 5240 MHz 6 Mbps: Vert |
| | 10480.150 | 1.0 | 333.9 | Vert | AV | 2.81E-09 | -55.5 | -27.0 | -28.5 | Ch 48, 5240 MHz 6 Mbps: On Side |
| | 10359.930 | 1.0 | 3.0 | Horz | AV | 2.13E-09 | -56.7 | -27.0 | -29.7 | Ch 36, 5180 MHz 6 Mbps: Vert |
| | 10519.930 | 1.0 | 315.0 | Vert | AV | 1.92E-09 | -57.2 | -27.0 | -30.2 | Ch 52, 5260 MHz 6 Mbps: On Side |
| | 10360.000 | 1.0 | 329.9 | Vert | AV | 1.09E-09 | -59.6 | -27.0 | -32.6 | Ch 36, 5180 MHz 6 Mbps: On Side |

| | | | | |
|-----------------------|---|-------------------|----------|--|
| Work Order: | LGPD0171 | Date: | 02/26/16 |  |
| Project: | None | Temperature: | 23 °C | |
| Job Site: | MN05 | Humidity: | 20% RH | |
| Serial Number: | 1023259 | Barometric Pres.: | 997 mbar | |
| Tested by: Jared Ison | | | | |
| EUT: | X Series | | | |
| Configuration: | 2 | | | |
| Customer: | ZOLL Medical Corp. | | | |
| Attendees: | None | | | |
| EUT Power: | 15 VDC | | | |
| Operating Mode: | Continuous single channel transmission using a modulated carrier. | | | |
| Deviations: | None | | | |
| Comments: | None | | | |


| Test Specifications | Test Method |
|---------------------|------------------|
| FCC 15.407:2016 | ANSI C63.10:2013 |

| Run # | 36 | Test Distance (m) | 1 | Antenna Height(s) | 1 to 4(m) | Results | Pass |
|-------|----|-------------------|---|-------------------|-----------|---------|------|
|-------|----|-------------------|---|-------------------|-----------|---------|------|



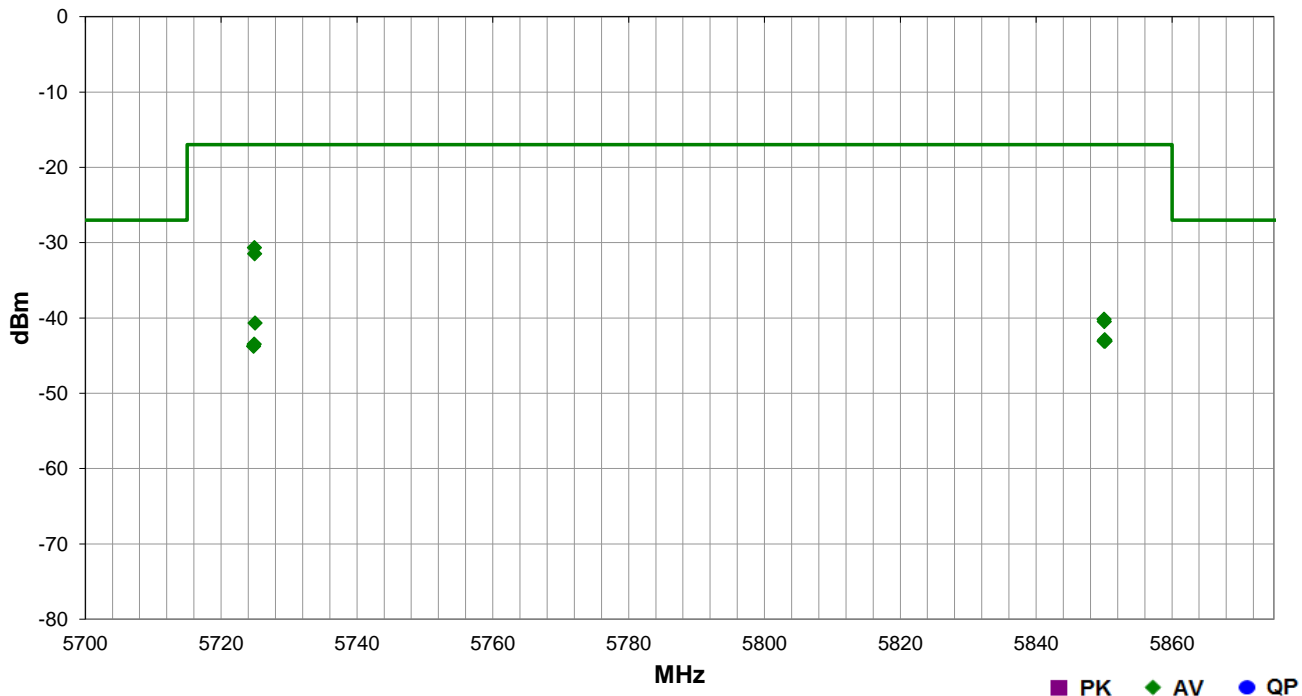
| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments |
|------------|------------------|-------------|-------------------------|-------------------|------------------------|---------------------------|--------------------------|----------|--------------------------|-------------------|----------------------|------------------------|-------------------------------------|
| 5149.993 | 28.3 | 35.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 53.8 | 54.0 | -0.2 | Ch 36, 5180 MHz 6 Mbps: EUT On Side |
| 5149.857 | 28.3 | 35.0 | 1.6 | 145.1 | 1.0 | 0.0 | Vert | AV | -9.5 | 53.8 | 54.0 | -0.2 | Ch 36, 5180 MHz 6 Mbps: EUT On Side |
| 5149.980 | 27.7 | 35.0 | 1.6 | 297.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 53.2 | 54.0 | -0.8 | Ch 36, 5180 MHz 6 Mbps: EUT Horz |
| 5149.947 | 27.7 | 35.0 | 1.6 | 279.8 | 1.0 | 0.0 | Horz | AV | -9.5 | 53.2 | 54.0 | -0.8 | Ch 36, 5180 MHz 6 Mbps: EUT Vert |
| 5149.953 | 27.1 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 52.6 | 54.0 | -1.4 | Ch. 36 5180 MCS0: EUT On Side |
| 5350.173 | 26.2 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 52.2 | 54.0 | -1.8 | Ch. 64 5320 MCS0: EUT On Side |
| 5459.463 | 25.7 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 52.1 | 54.0 | -1.9 | Ch. 100 5500 MCS0: EUT On Side |
| 5459.957 | 25.5 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 51.9 | 54.0 | -2.1 | Ch. 100 5500 6 Mbps: EUT On Side |
| 5350.483 | 25.9 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 51.9 | 54.0 | -2.1 | Ch. 64 5320 6 Mbps: EUT On Side |
| 5149.540 | 25.8 | 35.0 | 1.6 | 236.9 | 1.0 | 0.0 | Vert | AV | -9.5 | 51.3 | 54.0 | -2.7 | Ch 36, 5180 MHz 6 Mbps: EUT Horz |
| 5149.293 | 25.6 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 51.1 | 54.0 | -2.9 | Ch. 36 5180 36 Mbps: EUT On Side |
| 5149.993 | 25.1 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 50.6 | 54.0 | -3.4 | Ch. 36 5180 54 Mbps: EUT On Side |
| 5149.170 | 25.0 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 50.5 | 54.0 | -3.5 | Ch. 36 5180 MCS7: EUT On Side |
| 5459.680 | 23.9 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 50.3 | 54.0 | -3.7 | Ch. 100 5500 54 Mbps: EUT On Side |
| 5459.547 | 23.9 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 50.3 | 54.0 | -3.7 | Ch. 100 5500 MCS7: EUT On Side |
| 5458.800 | 23.9 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 50.3 | 54.0 | -3.7 | Ch. 100 5500 36 Mbps: EUT On Side |
| 5149.417 | 44.3 | 35.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 69.8 | 74.0 | -4.2 | Ch 36, 5180 MHz 6 Mbps: EUT On Side |
| 5350.957 | 23.6 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 49.6 | 54.0 | -4.4 | Ch. 64 5320 36 Mbps: EUT On Side |
| 5351.550 | 23.5 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 49.5 | 54.0 | -4.5 | Ch. 64 5320 54 Mbps: EUT On Side |
| 5350.873 | 23.5 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | AV | -9.5 | 49.5 | 54.0 | -4.5 | Ch. 64 5320 MCS7: EUT On Side |
| 5149.590 | 43.7 | 35.0 | 1.6 | 145.1 | 1.0 | 0.0 | Vert | PK | -9.5 | 69.2 | 74.0 | -4.8 | Ch 36, 5180 MHz 6 Mbps: EUT On Side |
| 5148.983 | 42.6 | 35.0 | 1.6 | 279.8 | 1.0 | 0.0 | Horz | PK | -9.5 | 68.1 | 74.0 | -5.9 | Ch 36, 5180 MHz 6 Mbps: EUT Vert |
| 5148.623 | 42.4 | 35.0 | 1.6 | 297.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 67.9 | 74.0 | -6.1 | Ch 36, 5180 MHz 6 Mbps: EUT Horz |
| 5350.567 | 41.8 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 67.8 | 74.0 | -6.2 | Ch. 64 5320 MCS0: EUT On Side |
| 5148.127 | 42.3 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 67.8 | 74.0 | -6.2 | Ch. 36 5180 36 Mbps: EUT On Side |
| 5459.593 | 41.0 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 67.4 | 74.0 | -6.6 | Ch. 100 5500 MCS0: EUT On Side |
| 5350.120 | 41.2 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 67.2 | 74.0 | -6.8 | Ch. 64 5320 6 Mbps: EUT On Side |
| 5459.813 | 39.6 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 66.0 | 74.0 | -8.0 | Ch. 100 5500 6 Mbps: EUT On Side |

| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/ Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments |
|---------------|---------------------|----------------|-------------------------------|----------------------|---------------------------|---------------------------------|---------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|-----------------------------------|
| 5149.840 | 40.5 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 66.0 | 74.0 | -8.0 | Ch. 36 5180 MCS0: EUT On Side |
| 5149.210 | 38.8 | 35.0 | 1.6 | 236.9 | 1.0 | 0.0 | Vert | PK | -9.5 | 64.3 | 74.0 | -9.7 | Ch 36, 5180 MHz 6 Mbps: EUT Horz |
| 5148.777 | 38.4 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 63.9 | 74.0 | -10.1 | Ch. 36 5180 54 Mbps: EUT On Side |
| 5459.143 | 36.6 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 63.0 | 74.0 | -11.0 | Ch. 100 5500 36 Mbps: EUT On Side |
| 5350.517 | 36.7 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 62.7 | 74.0 | -11.3 | Ch. 64 5320 36 Mbps: EUT On Side |
| 5458.330 | 35.3 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 61.7 | 74.0 | -12.3 | Ch. 100 5500 MCS7: EUT On Side |
| 5459.703 | 35.1 | 36.0 | 1.6 | 282.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 61.5 | 74.0 | -12.5 | Ch. 100 5500 54 Mbps: EUT On Side |
| 5351.313 | 35.4 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 61.4 | 74.0 | -12.6 | Ch. 64 5320 54 Mbps: EUT On Side |
| 5149.987 | 35.7 | 35.0 | 1.6 | 275.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 61.2 | 74.0 | -12.8 | Ch. 36 5180 MCS7: EUT On Side |
| 5350.913 | 34.8 | 35.5 | 1.6 | 257.0 | 1.0 | 0.0 | Horz | PK | -9.5 | 60.8 | 74.0 | -13.2 | Ch. 64 5320 MCS7: EUT On Side |

| | | | | |
|-----------------|---|-------------------|----------|---|
| Work Order: | LGPD0171 | Date: | 02/29/16 |  |
| Project: | None | Temperature: | 22 °C | |
| Job Site: | MN05 | Humidity: | 20% RH | |
| Serial Number: | 1023259 | Barometric Pres.: | 993 mbar | |
| EUT: | | X Series | | |
| Configuration: | 2 | | | |
| Customer: | ZOLL Medical Corp. | | | |
| Attendees: | None | | | |
| EUT Power: | 15 VDC | | | |
| Operating Mode: | Continuous single channel transmission using a modulated carrier. | | | |
| Deviations: | None | | | |
| Comments: | None | | | |

| Test Specifications | Test Method |
|---------------------|------------------|
| FCC 15.407:2016 | ANSI C63.10:2013 |

| Run # | 38 | 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 |
|--|------------|-------------------------|-------------------|---------------------------|----------|--------------|------------|-------------------|------------------------|-----------------------------------|
| | 5724.910 | 1.6 | 286.9 | Horz | AV | 8.54E-07 | -30.7 | -17.0 | -13.7 | Ch. 149 5745 MCS0: EUT On Side |
| | 5724.950 | 1.6 | 286.9 | Horz | AV | 7.11E-07 | -31.5 | -17.0 | -14.5 | Ch. 149 5745 6 Mbps: EUT On Side |
| | 5850.023 | 1.6 | 289.9 | Horz | AV | 9.56E-08 | -40.2 | -17.0 | -23.2 | Ch. 165 5825 MCS0: EUT On Side |
| | 5850.053 | 1.6 | 289.9 | Horz | AV | 8.92E-08 | -40.5 | -17.0 | -23.5 | Ch. 165 5825 6 Mbps: EUT On Side |
| | 5724.997 | 1.6 | 286.9 | Horz | AV | 8.54E-08 | -40.7 | -17.0 | -23.7 | Ch. 149 5745 36 Mbps: EUT On Side |
| | 5850.113 | 1.6 | 289.9 | Horz | AV | 5.13E-08 | -42.9 | -17.0 | -25.9 | Ch. 165 5825 36 Mbps: EUT On Side |
| | 5850.187 | 1.6 | 289.9 | Horz | AV | 4.90E-08 | -43.1 | -17.0 | -26.1 | Ch. 165 5825 MCS7: EUT On Side |
| | 5850.010 | 1.6 | 289.9 | Horz | AV | 4.90E-08 | -43.1 | -17.0 | -26.1 | Ch. 165 5825 54 Mbps: EUT On Side |
| | 5724.873 | 1.6 | 286.9 | Horz | AV | 4.48E-08 | -43.5 | -17.0 | -26.5 | Ch. 149 5745 54 Mbps: EUT On Side |
| | 5724.783 | 1.6 | 286.9 | Horz | AV | 4.18E-08 | -43.8 | -17.0 | -26.8 | Ch. 149 5745 MCS7: EUT On Side |

FREQUENCY STABILITY

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

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Interval (mo) |
|--------------------------------|---------------------------|-------------------|-----|------------|---------------|
| Meter - Multimeter | Fluke | 117/EFSP | MLR | 5/27/2015 | 36 |
| Power Supply - DC | Agilent | U8002A | TPZ | NCR | 0 |
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFN | 2/10/2015 | 15 |
| Attenuator | S.M. Electronics | SA26B-20 | RFW | 2/26/2016 | 12 |
| Block - DC | Fairview Microwave | SD3379 | AMI | 9/18/2015 | 12 |
| Cable | ESM Cable Corp. | TTBJ141 KMKM-72 | MNU | 9/18/2015 | 12 |
| Thermometer | Omega Engineering, Inc. | HH311 | DUB | 11/3/2014 | 36 |
| Chamber - Temperature/Humidity | Cincinnati Sub Zero (CSZ) | ZPH-32-3.5-SCT/AC | TBF | 10/21/2015 | 12 |

TEST DESCRIPTION

A direct connect measurement was made between the EUT's antenna cable and a spectrum analyzer. The spectrum analyzer is equipped with a precision frequency reference that exceeds the stability requirement of the EUT.

Measurements were made at the edges of the main transmit bands as called out on the data sheets. Testing was done with an absence of modulation in a CW mode of operation.

The primary supply voltage was varied from 85 % to 115% of the nominal voltage Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (-30 ° to +50° C) and at 10°C intervals.

Where a ppm limit applies: $\text{ppm} = (\text{Measured Frequency} / \text{Measured Nominal Frequency} - 1) * 1,000,000$

Per the requirements of FCC 15.407:


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

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

FREQUENCY STABILITY

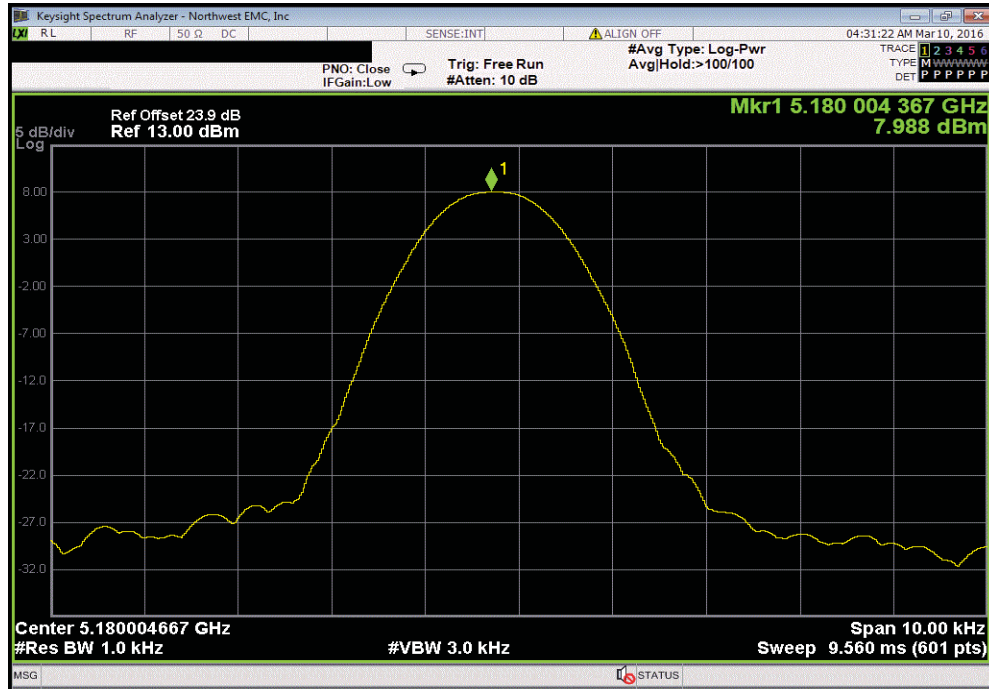


XMt 2015.01.14

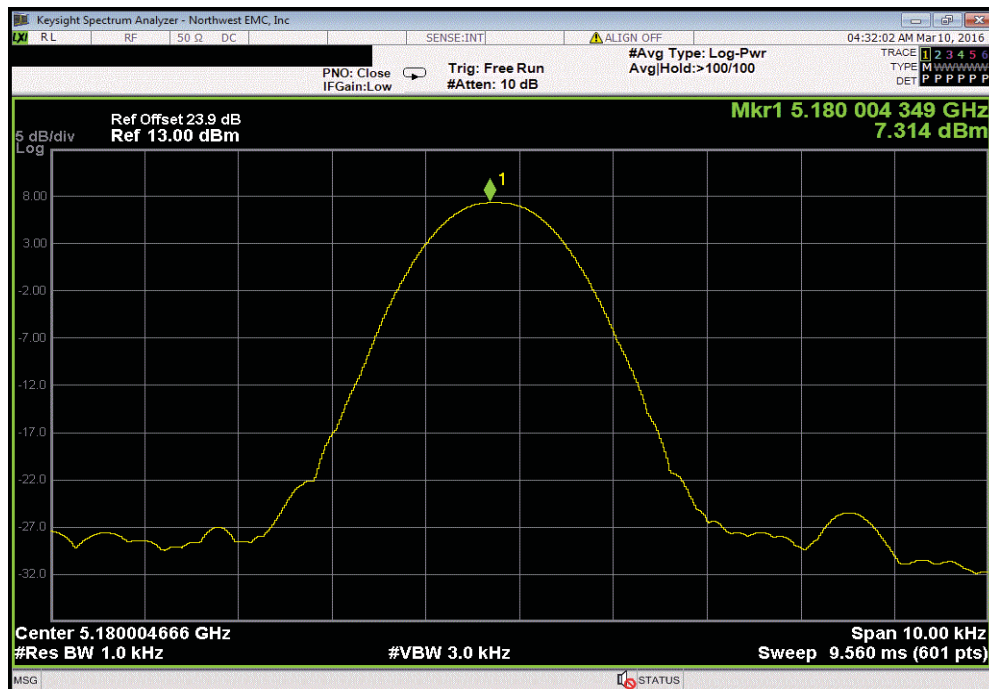
| | | | |
|--|-------------------|---|----------------------|
| EUT: X Series | | Work Order: LGPD0171 | |
| Serial Number: 1023259 | | Date: 03/09/16 | |
| Customer: ZOLL Medical Corp. | | Temperature: 22°C | |
| Attendees: None | | Humidity: 27% | |
| Project: None | | Barometric Pres.: 985.4 | |
| Tested by: Jared Ison | | Power: 15 VDC | |
| | | Job Site: MN08 | |
| TEST SPECIFICATIONS | | Test Method | |
| FCC 15.407:2016 | | ANSI C63.10:2013 | |
| COMMENTS | | | |
| EUT set to single channel continuous transmission using an unmodulated carrier. Test modes were client provided. | | | |
| DEVIATIONS FROM TEST STANDARD | | | |
| None | | | |
| Configuration # | 2 | Signature  | |
| | | Measured Value (MHz) | Assigned Value (MHz) |
| | | Error (ppm) | Limit (ppm) |
| | | | Results |
| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz | | | |
| | Voltage: 115% | 5180.004367 | 5180 |
| | Voltage: 100% | 5180.004349 | 5180 |
| | Voltage: 85% | 5180.004283 | 5180 |
| | Temperature: +50° | 5180.002084 | 5180 |
| | Temperature: +40° | 5180.003167 | 5180 |
| | Temperature: +30° | 5180.0036 | 5180 |
| | Temperature: +20° | 5180.003283 | 5180 |
| | Temperature: +10° | 5180.002667 | 5180 |
| | Temperature: 0° | 5180.002384 | 5180 |
| | Temperature: -10° | 5180.002417 | 5180 |
| | Temperature: -20° | 5180.001917 | 5180 |
| | Temperature: -30° | 5180.002533 | 5180 |
| 5250 MHz - 5350 MHz - High Channel, 5320 MHz | | | |
| | Voltage: 115% | 5320.004366 | 5320 |
| | Voltage: 100% | 5320.004467 | 5320 |
| | Voltage: 85% | 5320.004416 | 5320 |
| | Temperature: +50° | 5320.002017 | 5320 |
| | Temperature: +40° | 5320.0033 | 5320 |
| | Temperature: +30° | 5320.003649 | 5320 |
| | Temperature: +20° | 5320.003349 | 5320 |
| | Temperature: +10° | 5320.002749 | 5320 |
| | Temperature: 0° | 5320.002467 | 5320 |
| | Temperature: -10° | 5320.0026 | 5320 |
| | Temperature: -20° | 5320.001984 | 5320 |
| | Temperature: -30° | 5320.002717 | 5320 |
| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz | | | |
| | Voltage: 115% | 5500.0045 | 5500 |
| | Voltage: 100% | 5500.004484 | 5500 |
| | Voltage: 85% | 5500.00455 | 5500 |
| | Temperature: +50° | 5500.002067 | 5500 |
| | Temperature: +40° | 5500.003433 | 5500 |
| | Temperature: +30° | 5500.0038 | 5500 |
| | Temperature: +20° | 5500.00355 | 5500 |
| | Temperature: +10° | 5500.002866 | 5500 |
| | Temperature: 0° | 5500.002583 | 5500 |
| | Temperature: -10° | 5500.002749 | 5500 |
| | Temperature: -20° | 5500.002 | 5500 |
| | Temperature: -30° | 5500.002766 | 5500 |
| 5470 MHz - 5725 MHz - High Channel, 5700 MHz | | | |
| | Voltage: 115% | 5700.0047 | 5700 |
| | Voltage: 100% | 5700.0048 | 5700 |
| | Voltage: 85% | 5700.00475 | 5700 |
| | Temperature: +50° | 5700.002117 | 5700 |
| | Temperature: +40° | 5700.0036 | 5700 |
| | Temperature: +30° | 5700.00395 | 5700 |
| | Temperature: +20° | 5700.00365 | 5700 |
| | Temperature: +10° | 5700.003033 | 5700 |
| | Temperature: 0° | 5700.002633 | 5700 |
| | Temperature: -10° | 5700.002767 | 5700 |
| | Temperature: -20° | 5700.0021 | 5700 |
| | Temperature: -30° | 5700.002917 | 5700 |
| 5725 MHz - 5850 MHz - High Channel, 5825 MHz | | | |
| | Voltage: 115% | 5825.004771 | 5825 |
| | Voltage: 100% | 5825.00484 | 5825 |
| | Voltage: 85% | 5825.004881 | 5825 |
| | Temperature: +50° | 5825.002127 | 5825 |
| | Temperature: +40° | 5825.00379 | 5825 |
| | Temperature: +30° | 5825.00414 | 5825 |
| | Temperature: +20° | 5825.003748 | 5825 |
| | Temperature: +10° | 5825.003148 | 5825 |
| | Temperature: 0° | 5825.002707 | 5825 |
| | Temperature: -10° | 5825.002828 | 5825 |
| | Temperature: -20° | 5825.002237 | 5825 |
| | Temperature: -30° | 5825.002808 | 5825 |

FREQUENCY STABILITY

| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Voltage: 115% | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.004367 | 5180 | 0.8 | 100 | Pass | |

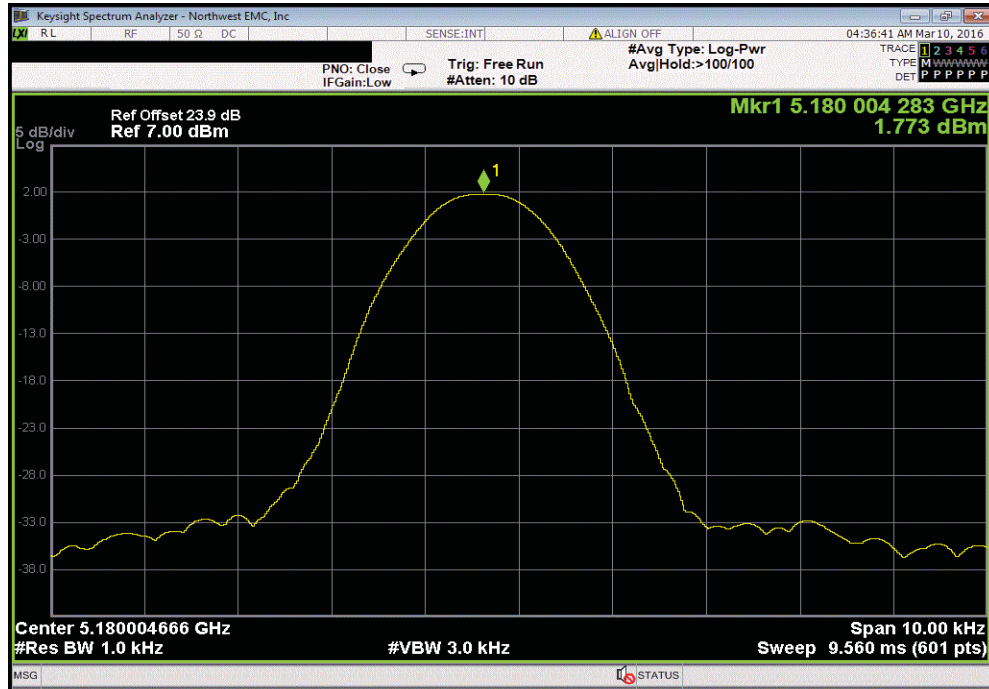


| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Voltage: 100% | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.004349 | 5180 | 0.8 | 100 | Pass | |

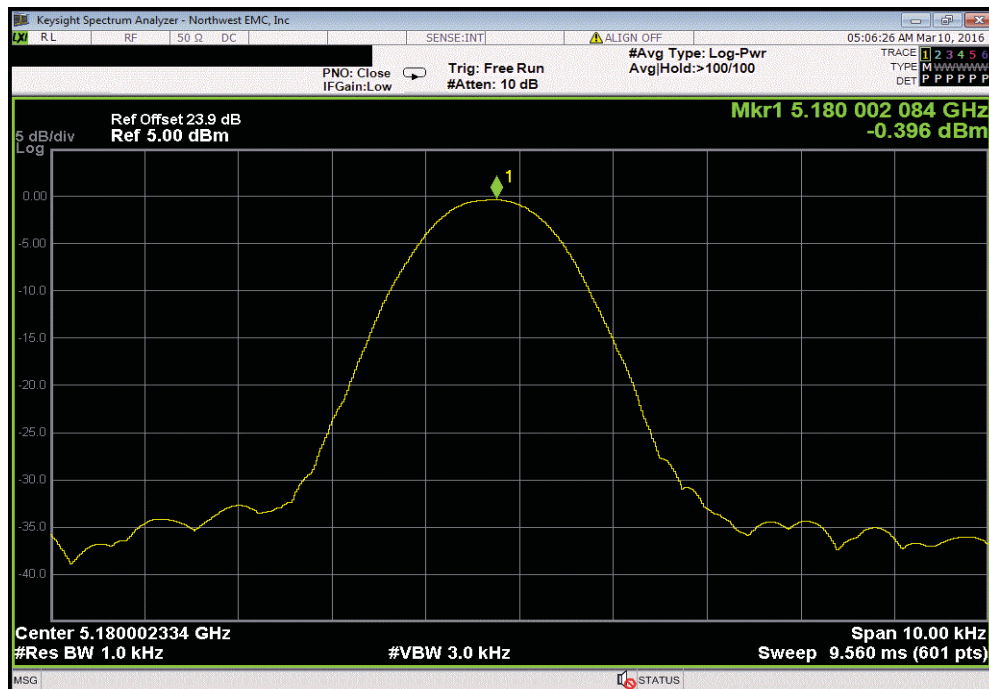


FREQUENCY STABILITY

| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Voltage: 85% | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.004283 | 5180 | 0.8 | 100 | Pass | |

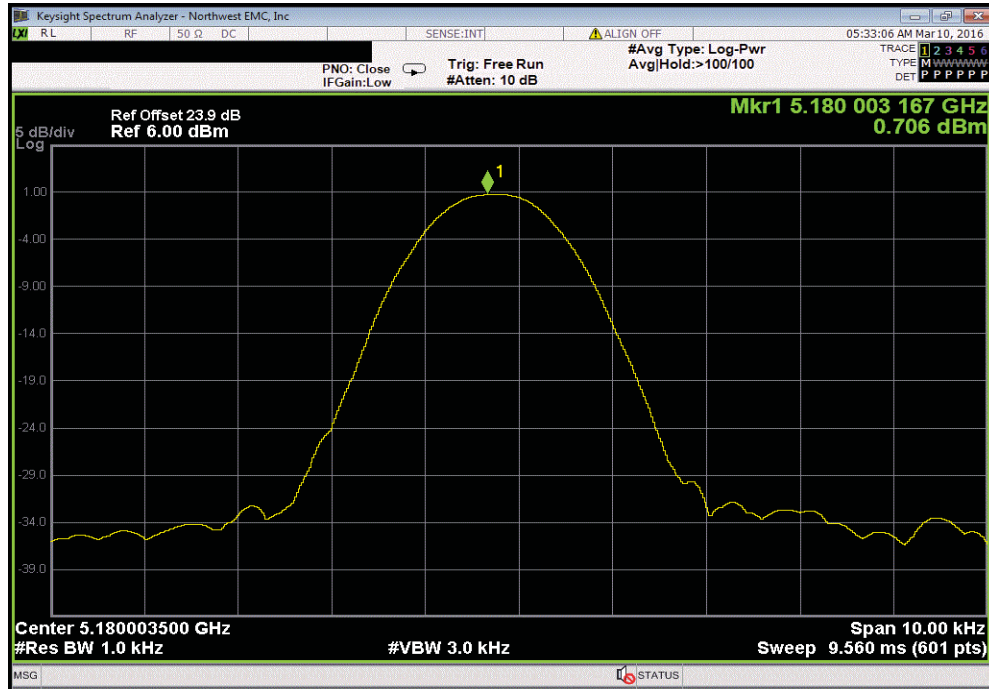


| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +50° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.002084 | 5180 | 0.4 | 100 | Pass | |

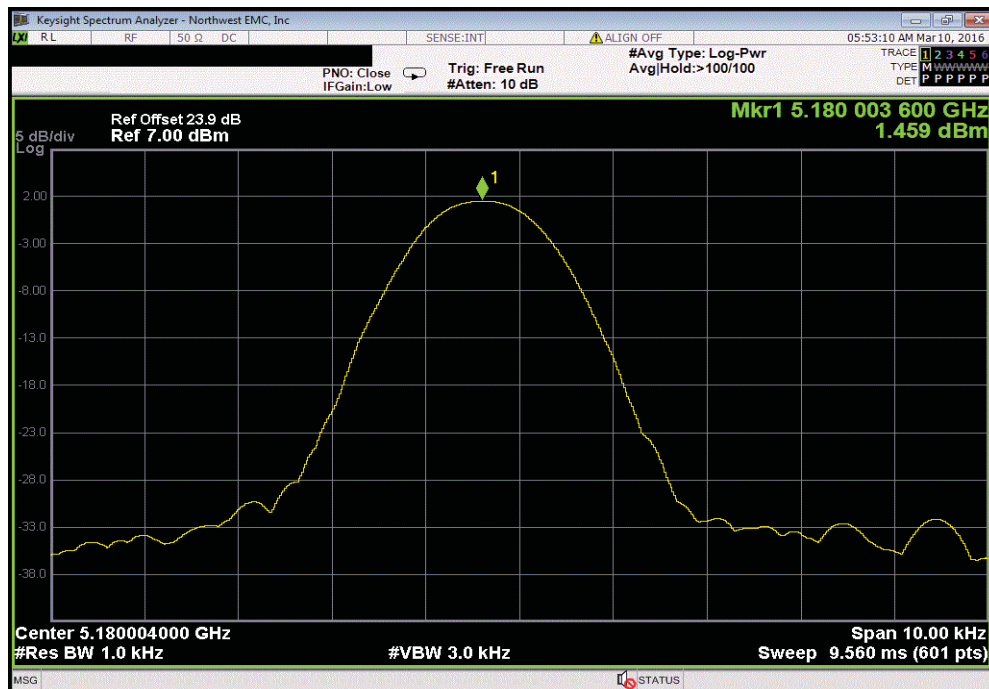


FREQUENCY STABILITY

| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +40° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.003167 | 5180 | 0.6 | 100 | Pass | |

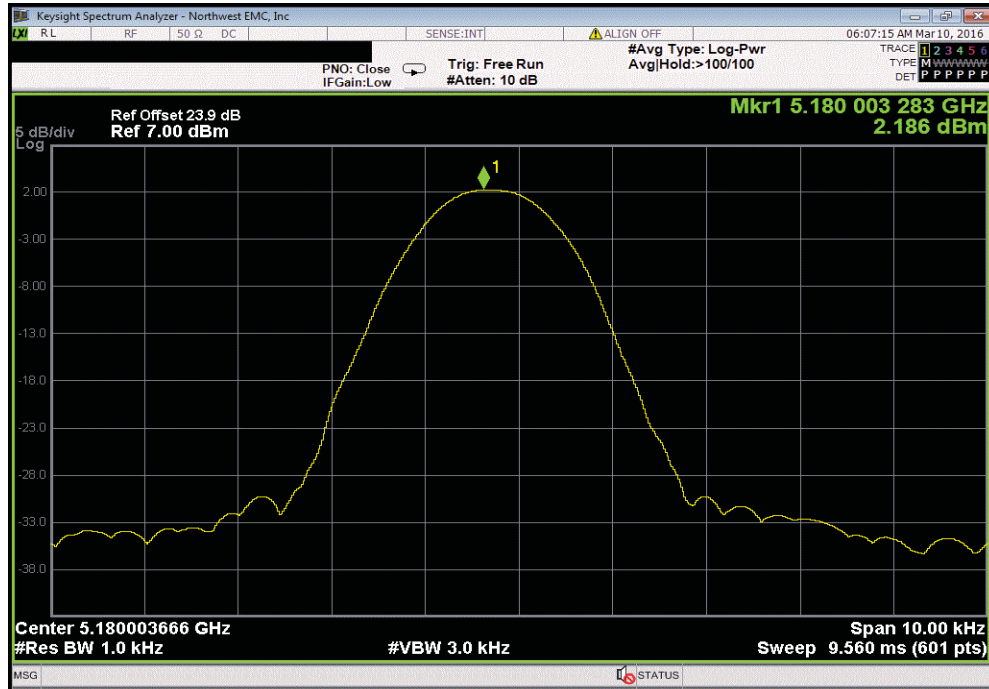


| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +30° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.0036 | 5180 | 0.7 | 100 | Pass | |

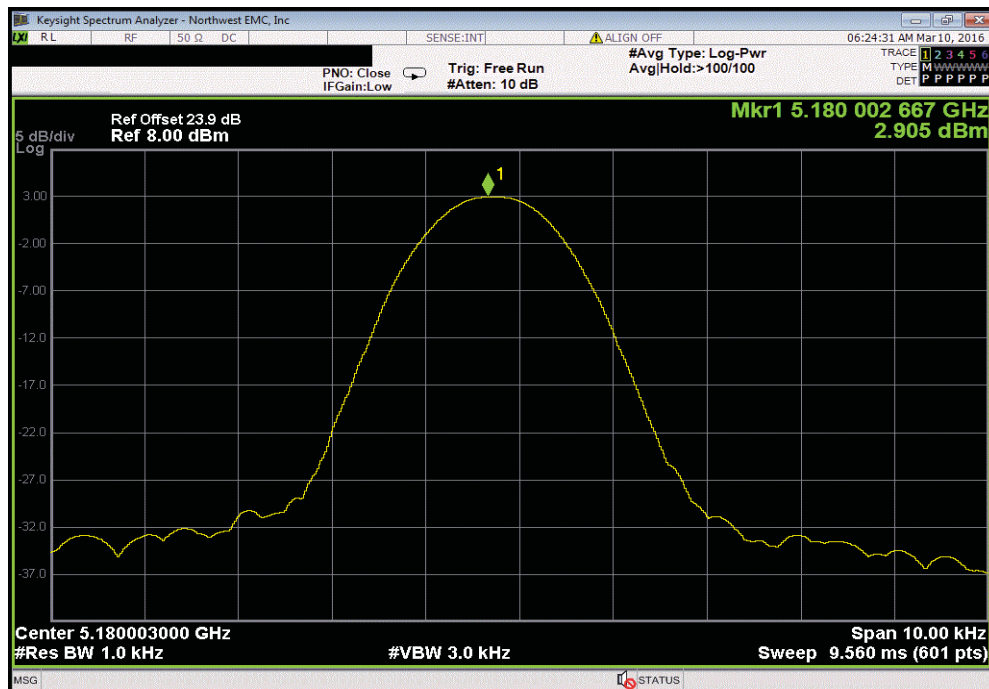


FREQUENCY STABILITY

| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +20° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.003283 | 5180 | 0.6 | 100 | Pass | |

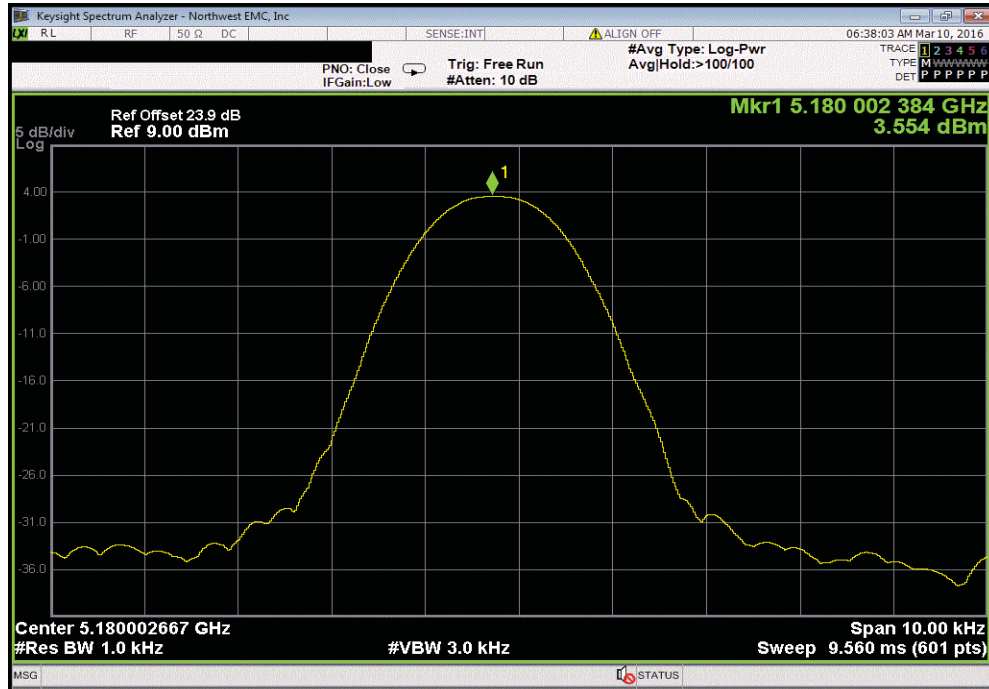


| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: +10° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.002667 | 5180 | 0.5 | 100 | Pass | |

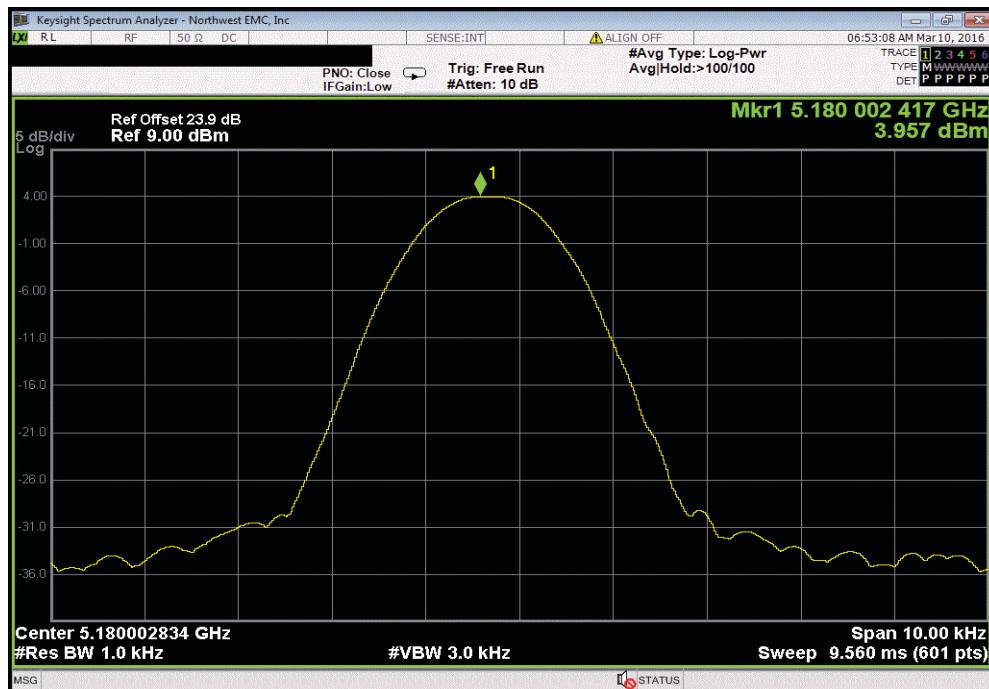


FREQUENCY STABILITY

| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: 0° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.002384 | 5180 | 0.5 | 100 | Pass | |

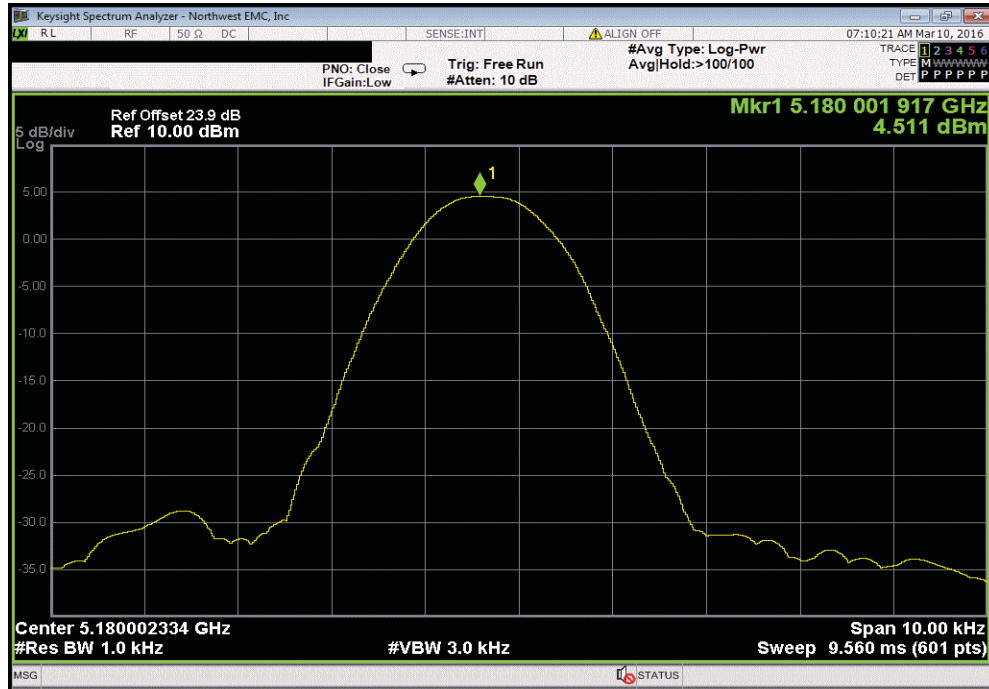


| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: -10° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.002417 | 5180 | 0.5 | 100 | Pass | |

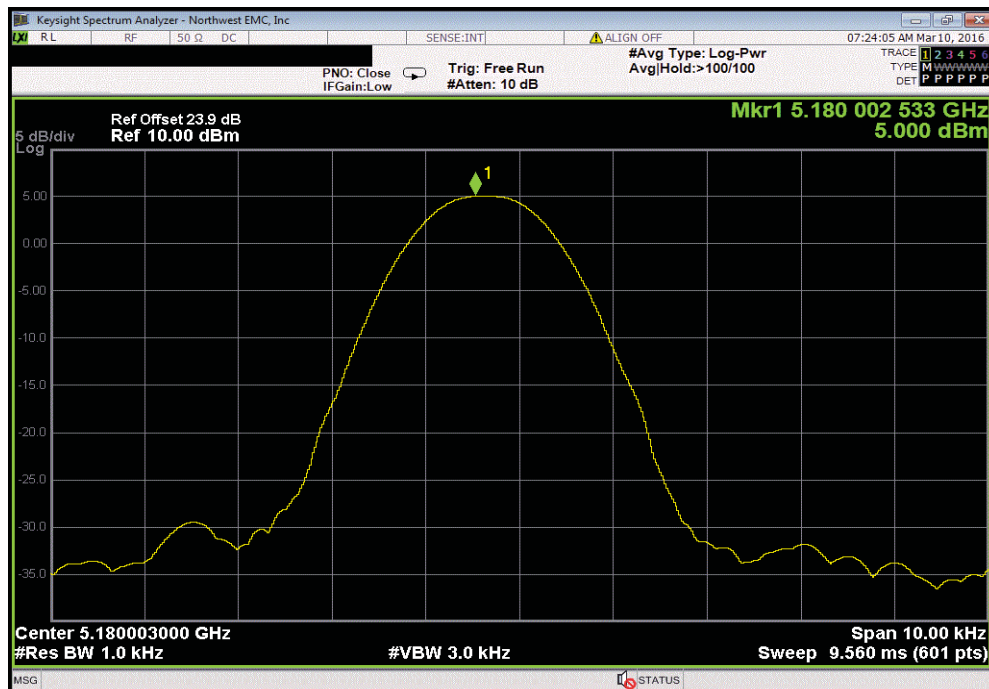


FREQUENCY STABILITY

| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: -20° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.001917 | 5180 | 0.4 | 100 | Pass | |

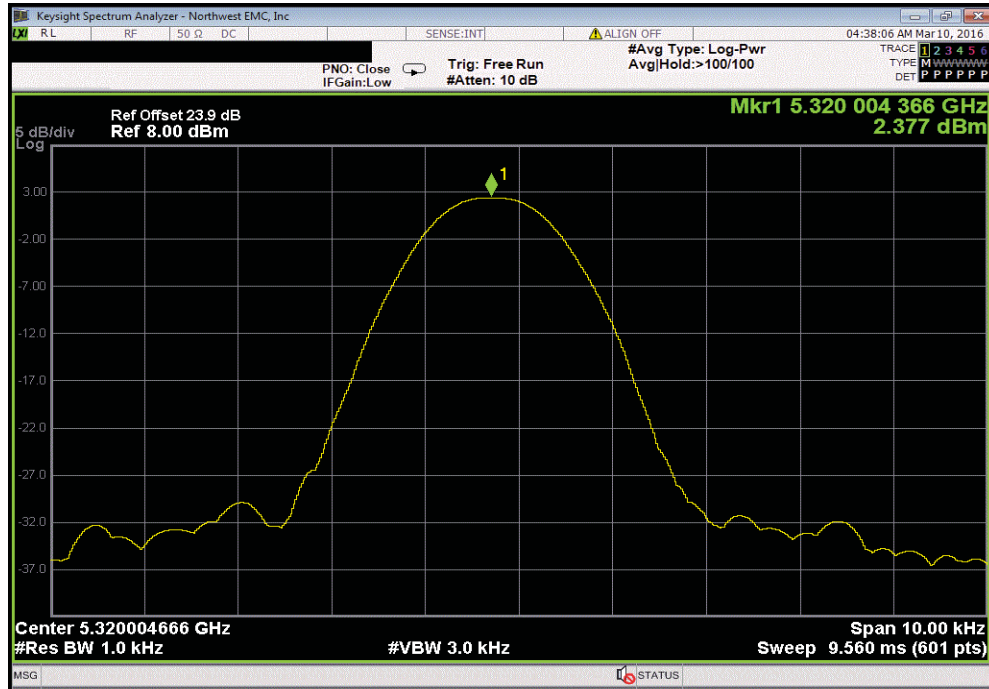


| 5150 MHz - 5250 MHz - Low Channel, 5180 MHz, Temperature: -30° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5180.002533 | 5180 | 0.5 | 100 | Pass | |

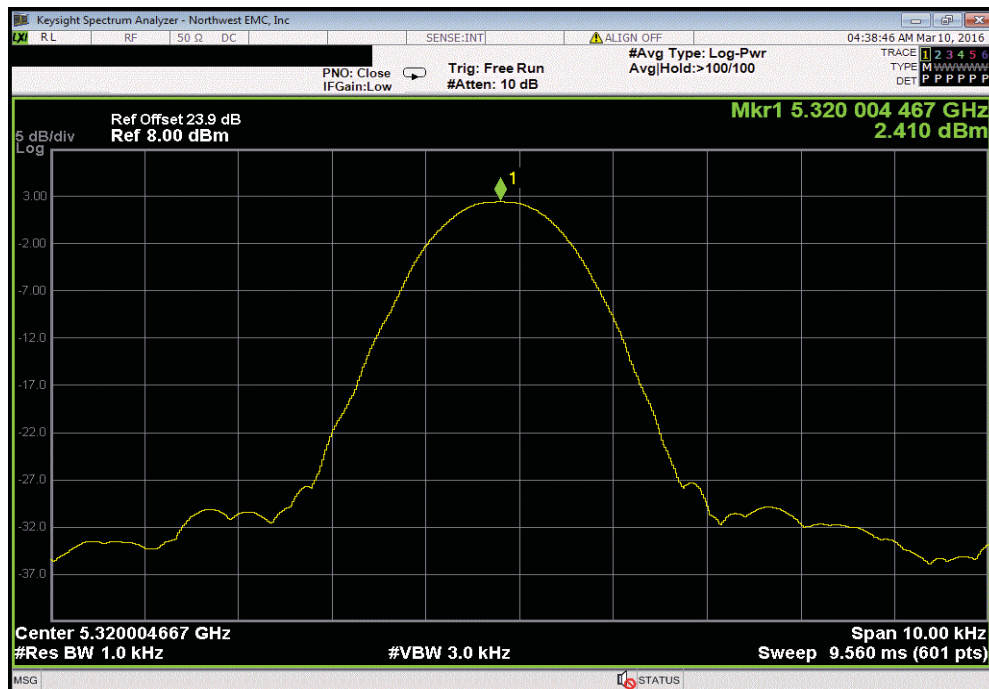


FREQUENCY STABILITY

| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Voltage: 115% | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.004366 | 5320 | 0.8 | 100 | Pass | |

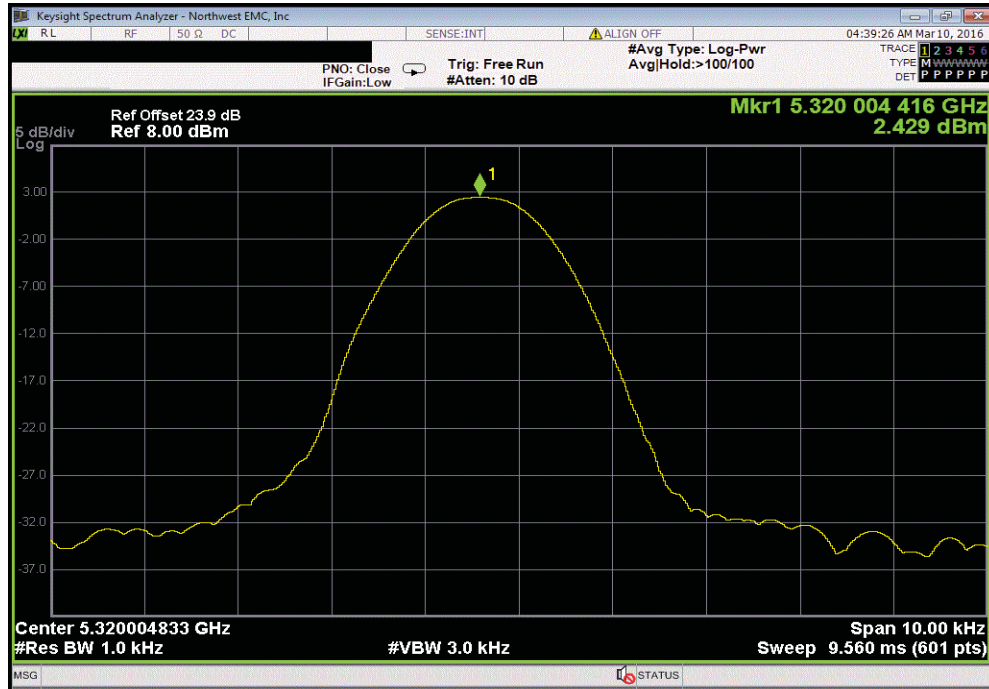


| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Voltage: 100% | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.004467 | 5320 | 0.8 | 100 | Pass | |

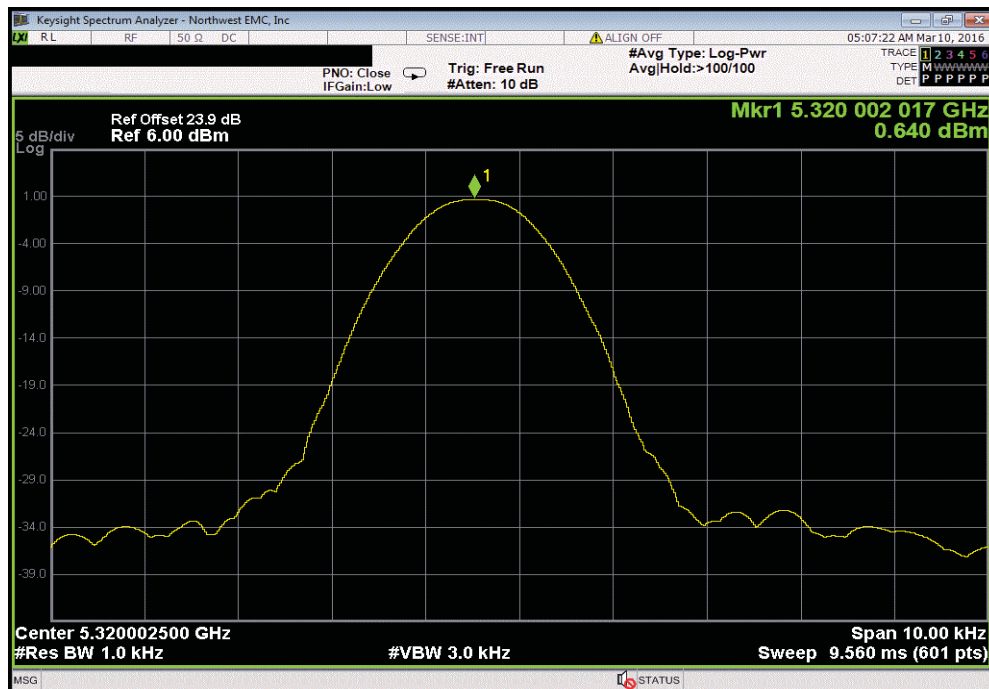


FREQUENCY STABILITY

| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Voltage: 85% | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.004416 | 5320 | 0.8 | 100 | Pass | |

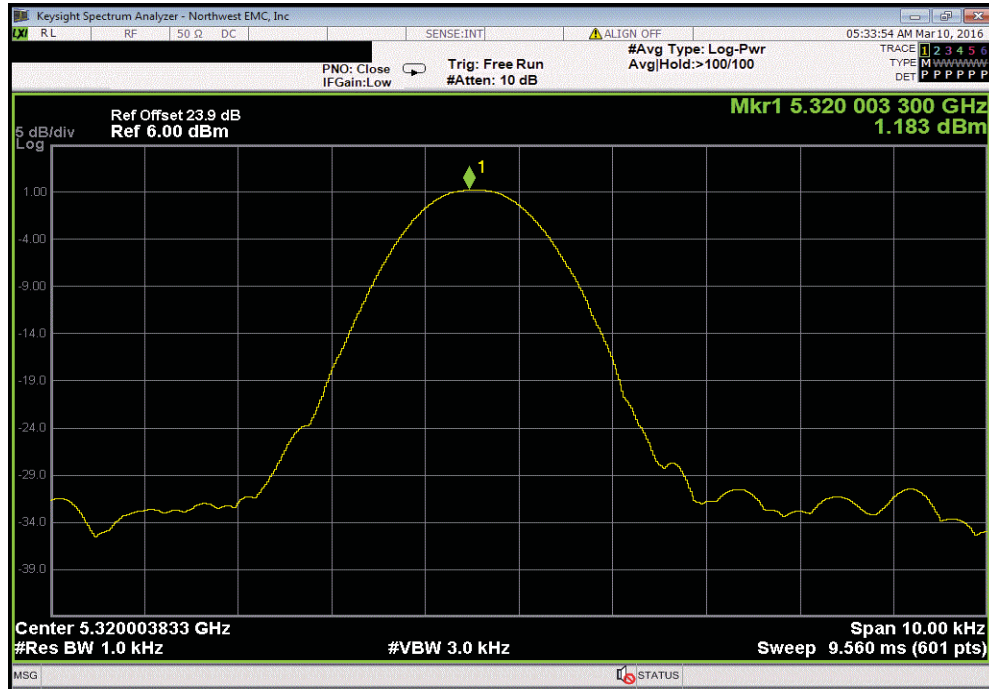


| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +50° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.002017 | 5320 | 0.4 | 100 | Pass | |

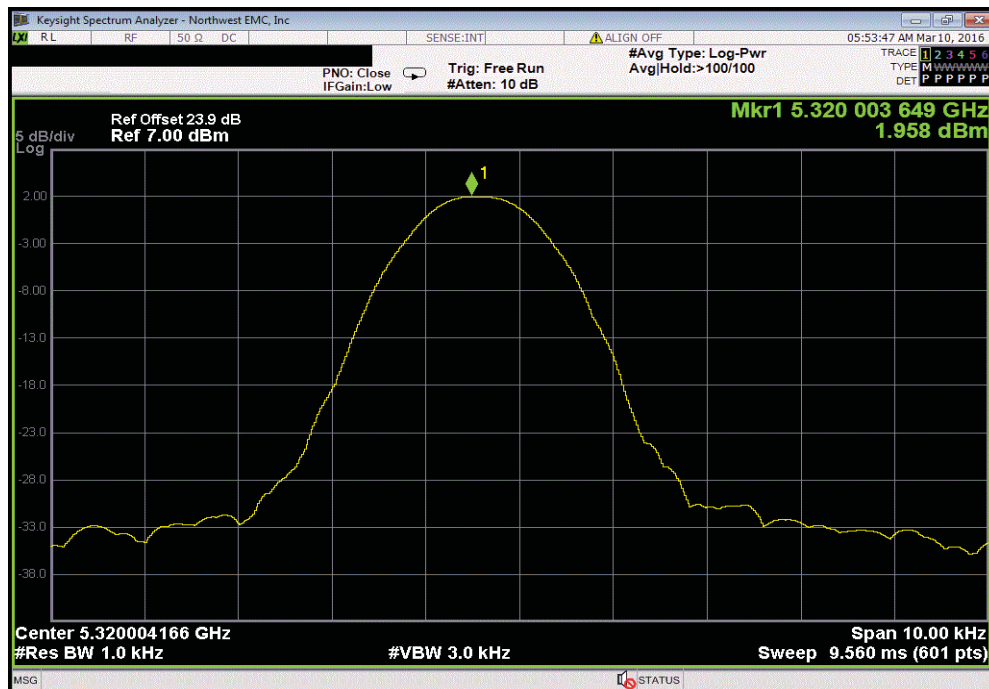


FREQUENCY STABILITY

| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +40° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.0033 | 5320 | 0.6 | 100 | Pass | |

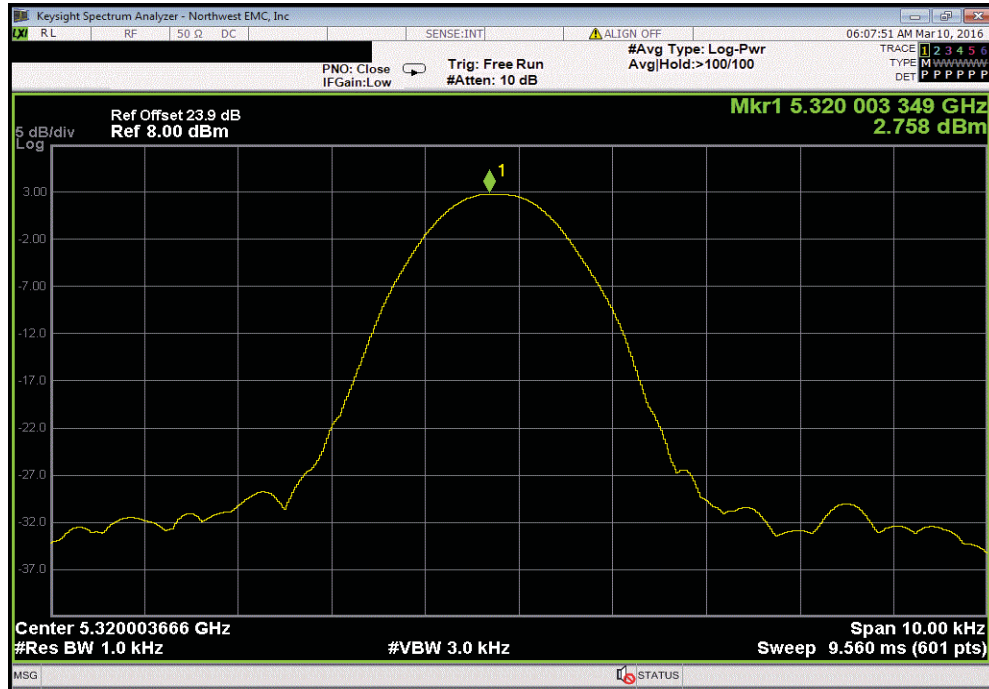


| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +30° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.003649 | 5320 | 0.7 | 100 | Pass | |

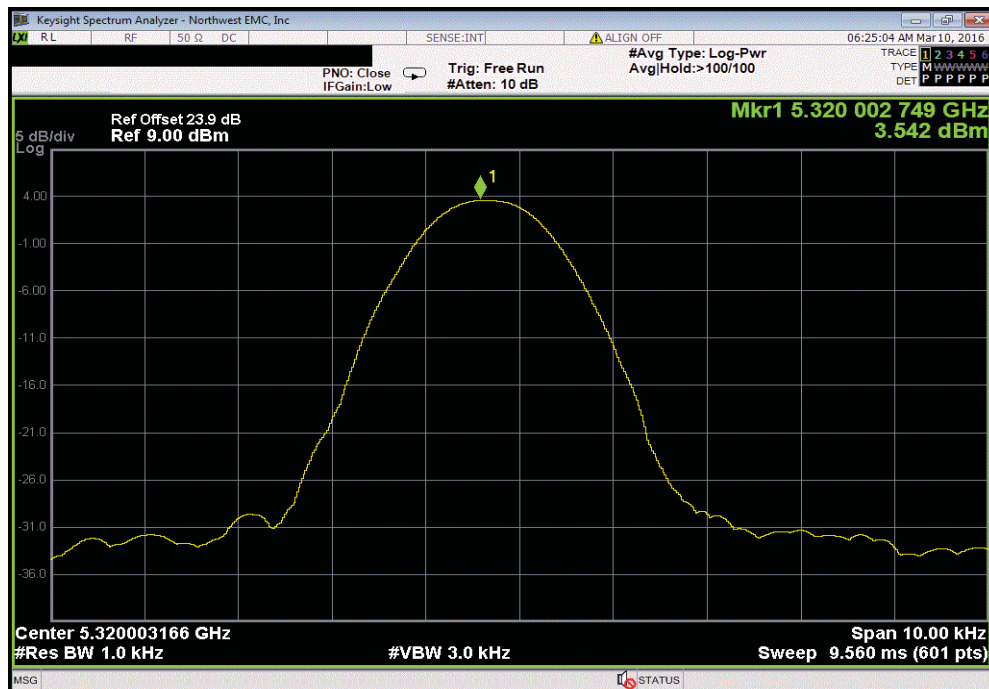


FREQUENCY STABILITY

| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +20° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.003349 | 5320 | 0.6 | 100 | Pass | |

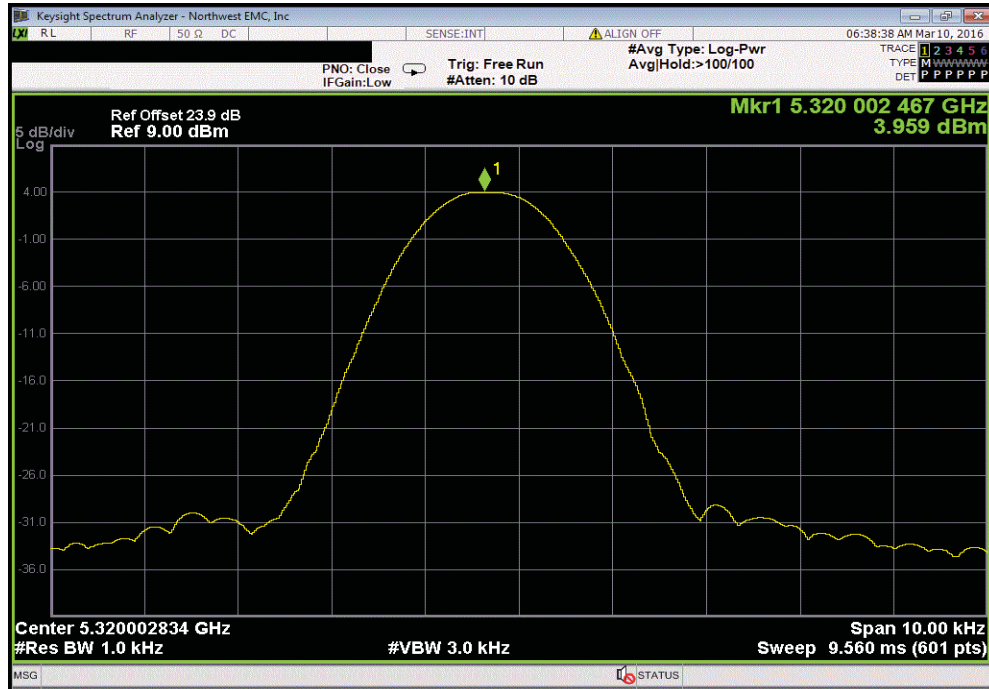


| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: +10° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.002749 | 5320 | 0.5 | 100 | Pass | |

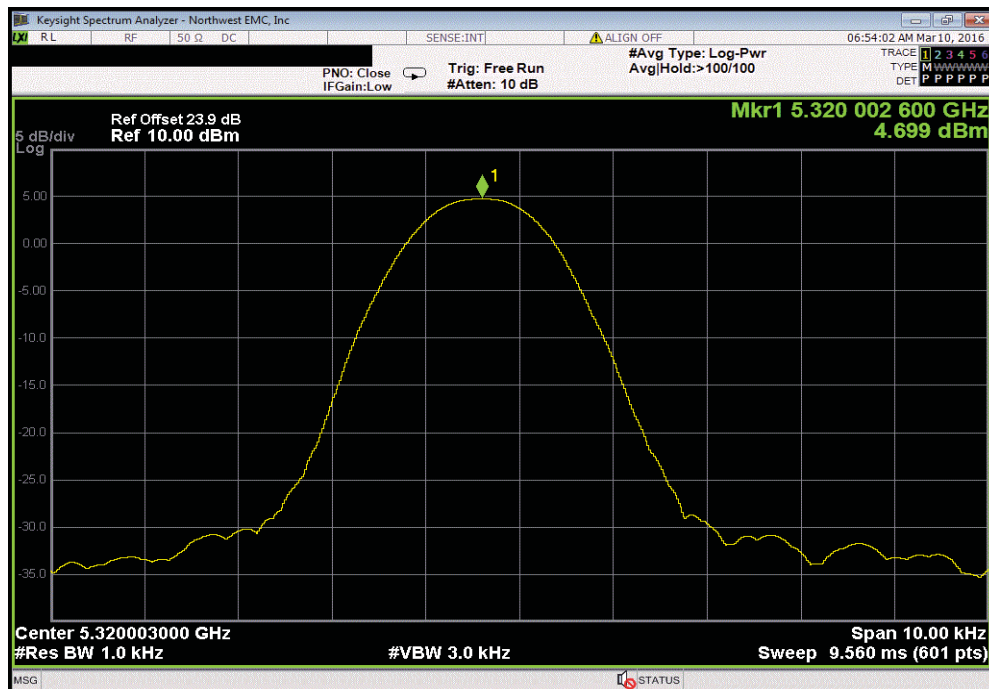


FREQUENCY STABILITY

| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: 0° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.002467 | 5320 | 0.5 | 100 | Pass | |

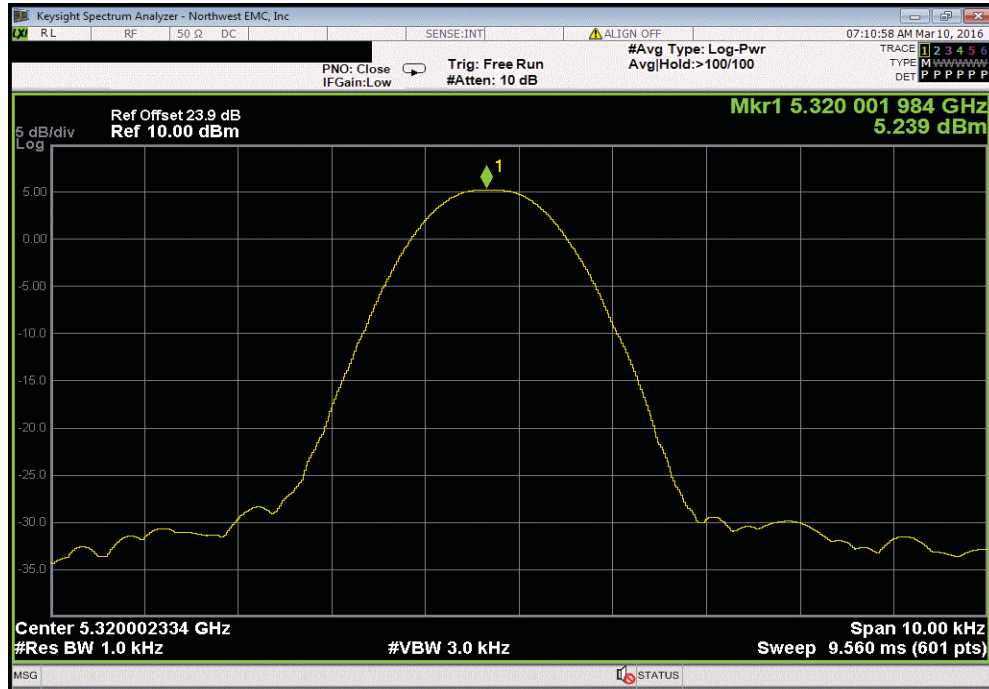


| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: -10° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5320.0026 | 5320 | 0.5 | 100 | Pass | |

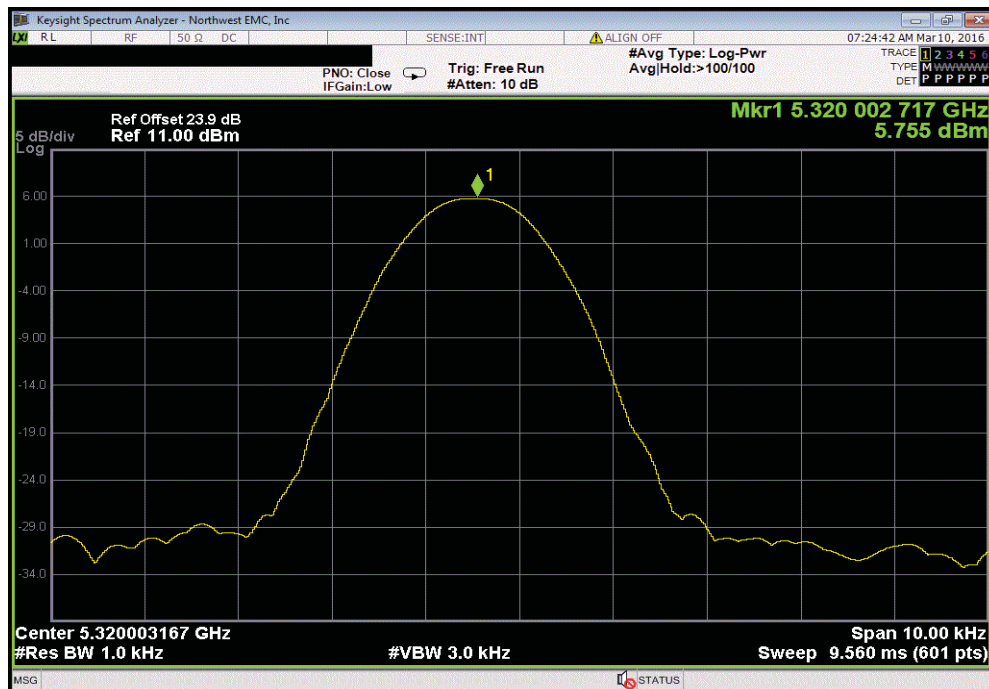


FREQUENCY STABILITY

| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: -20° | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
| | 5320.001984 | 5320 | 0.4 | 100 | Pass |

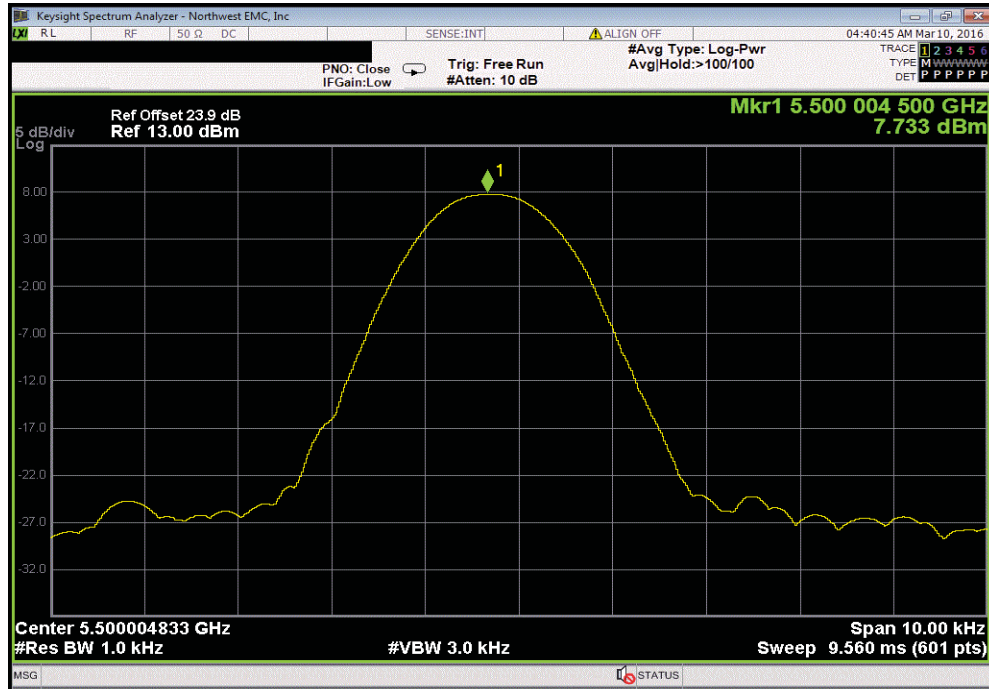


| 5250 MHz - 5350 MHz - High Channel, 5320 MHz, Temperature: -30° | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
| | 5320.002717 | 5320 | 0.5 | 100 | Pass |

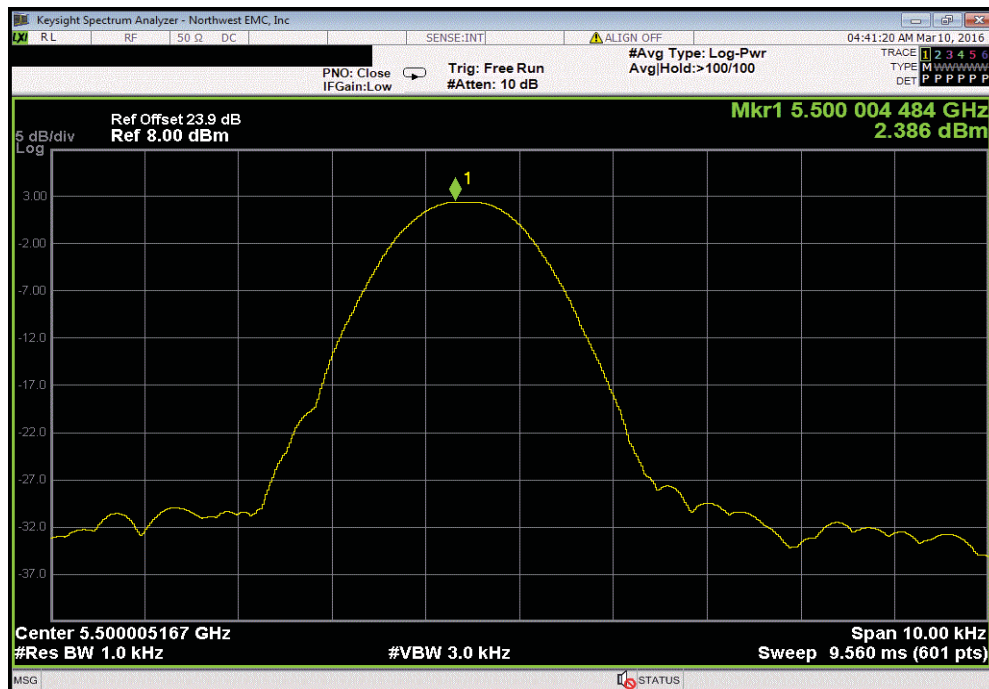


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Voltage: 115% | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.0045 | 5500 | 0.8 | 100 | Pass | |

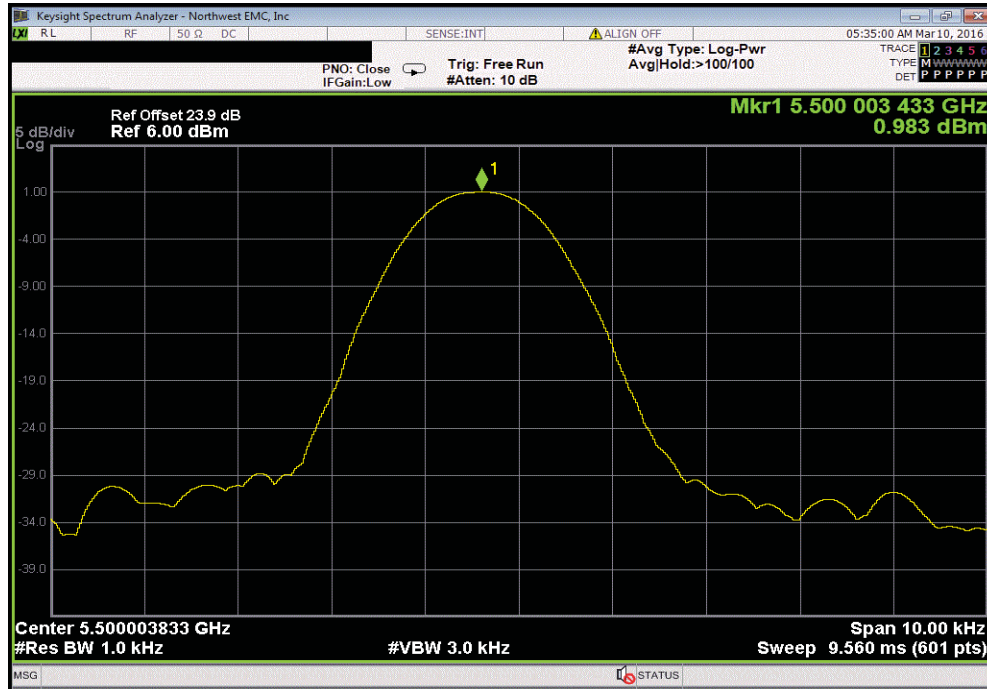


| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Voltage: 100% | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.004484 | 5500 | 0.8 | 100 | Pass | |

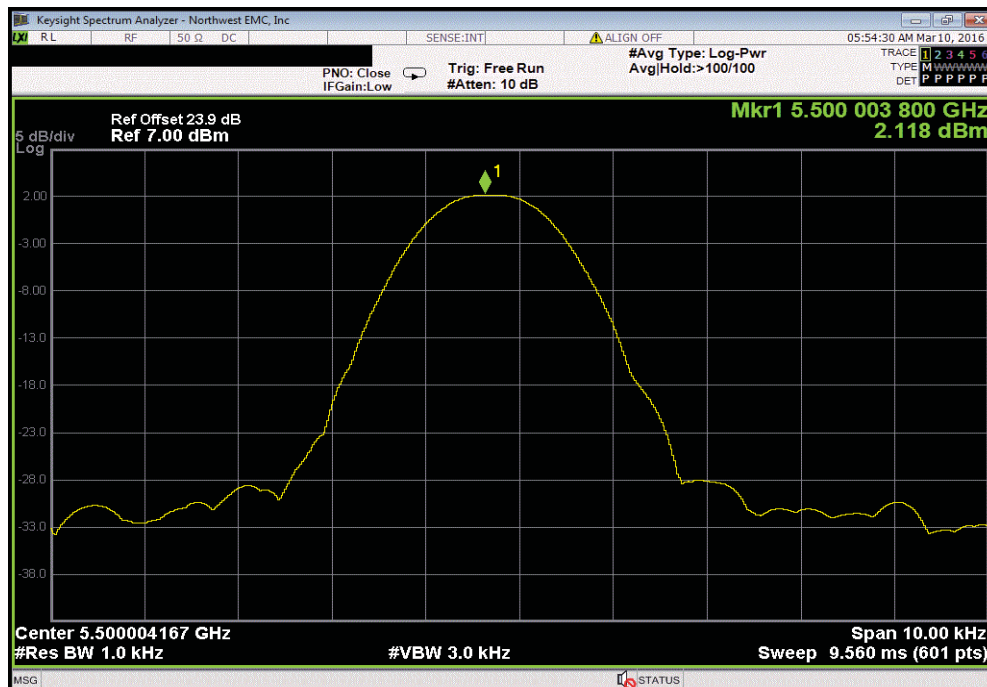


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +40° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.003433 | 5500 | 0.6 | 100 | Pass | |

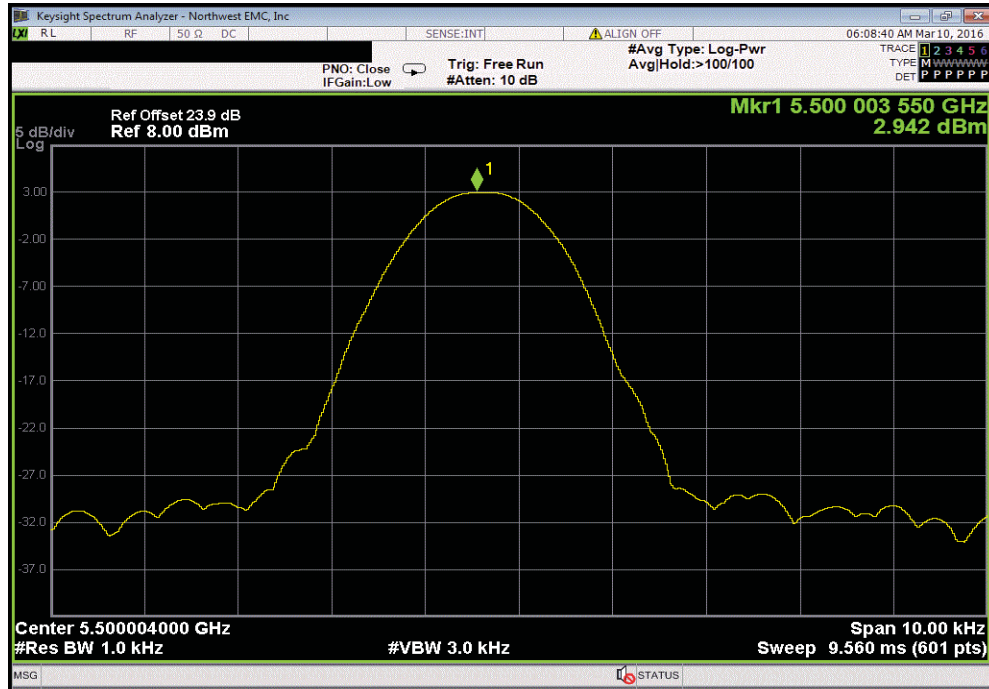


| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +30° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.0038 | 5500 | 0.7 | 100 | Pass | |

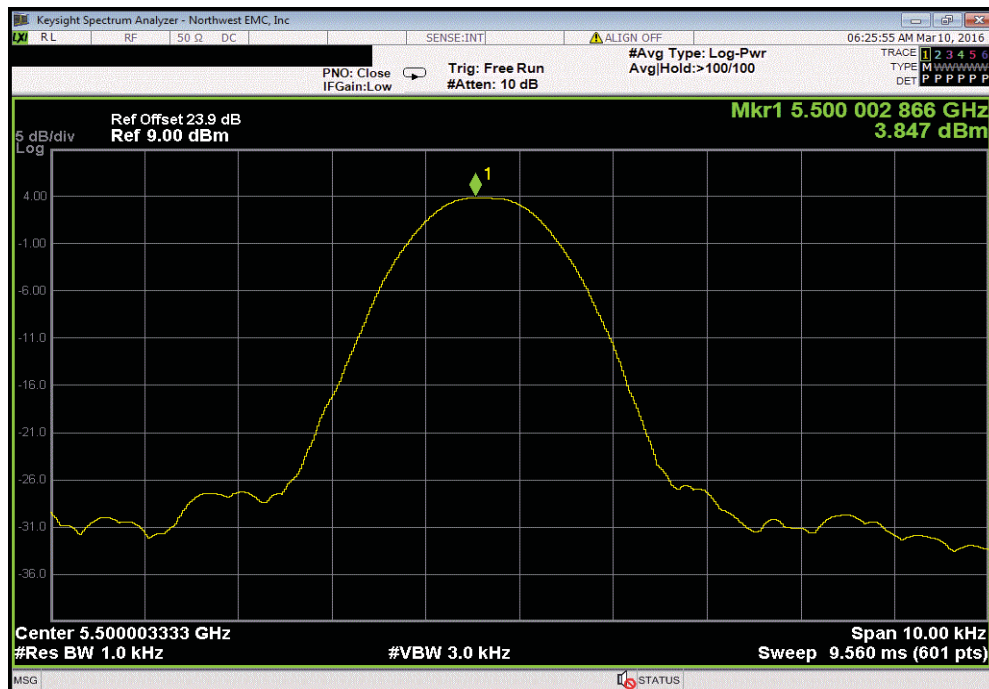


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +20° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.00355 | 5500 | 0.7 | 100 | Pass | |

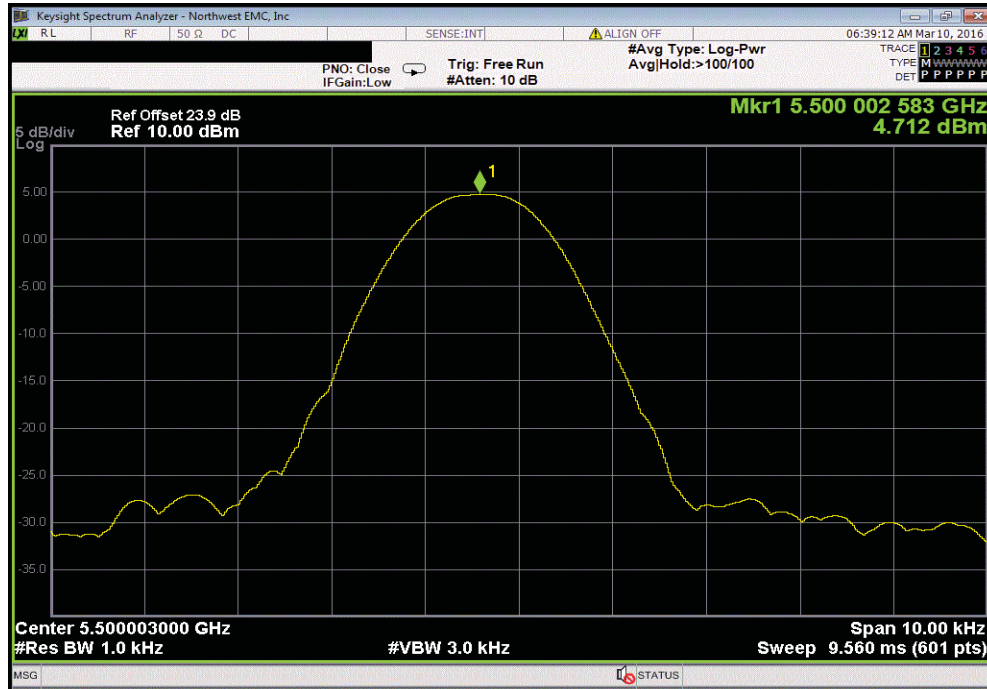


| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: +10° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.002866 | 5500 | 0.5 | 100 | Pass | |

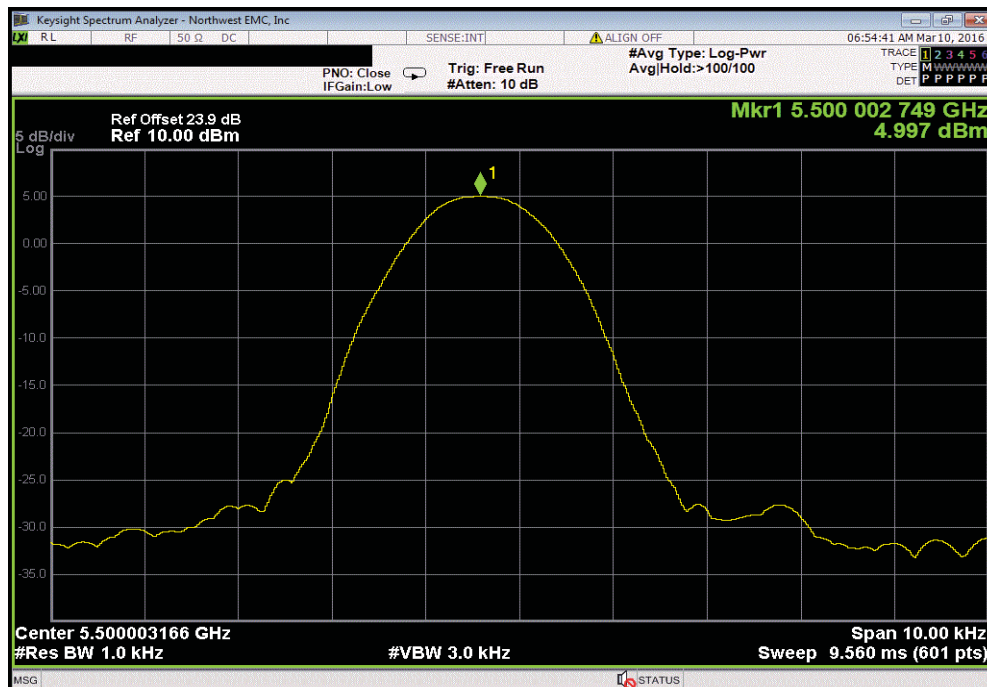


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: 0° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.002583 | 5500 | 0.5 | 100 | Pass | |

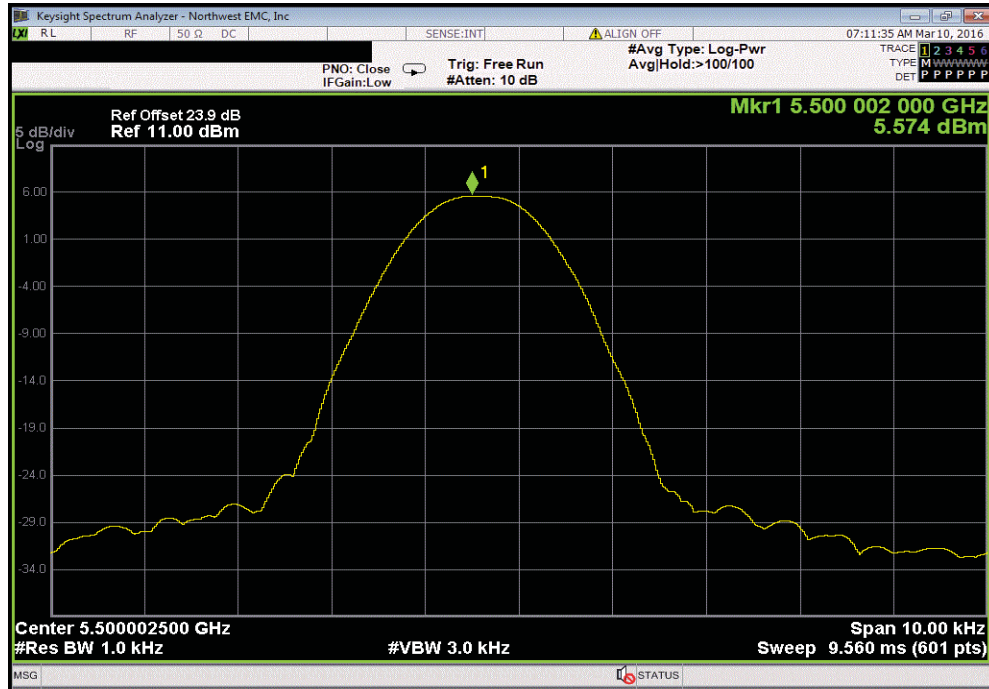


| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: -10° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.002749 | 5500 | 0.5 | 100 | Pass | |

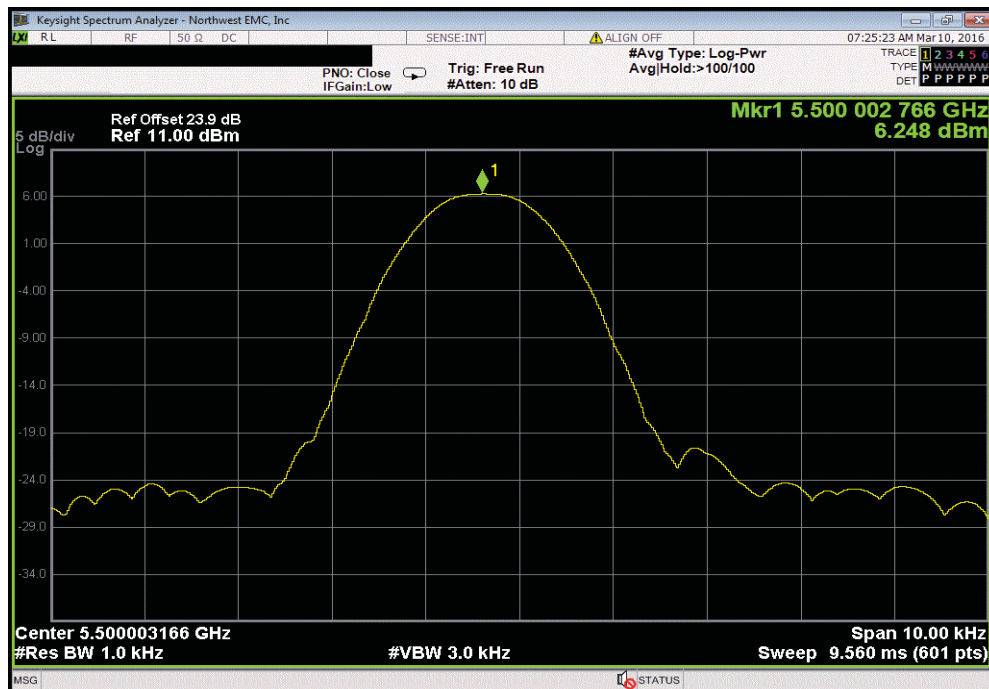


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: -20° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.002 | 5500 | 0.4 | 100 | Pass | |

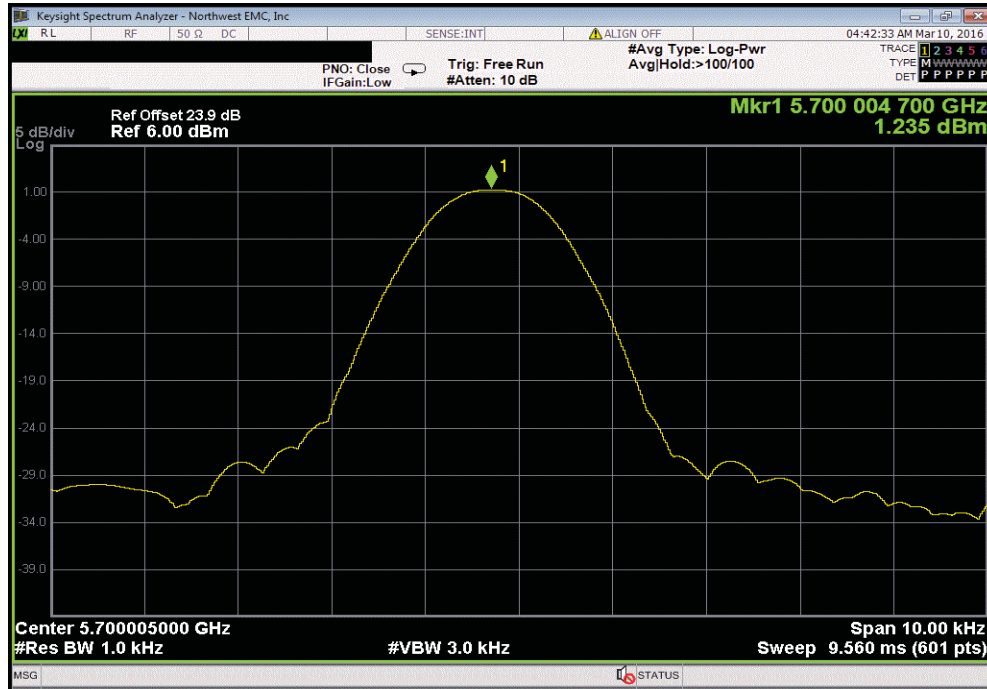


| 5470 MHz - 5725 MHz - Low Channel, 5500 MHz, Temperature: -30° | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5500.002766 | 5500 | 0.5 | 100 | Pass | |

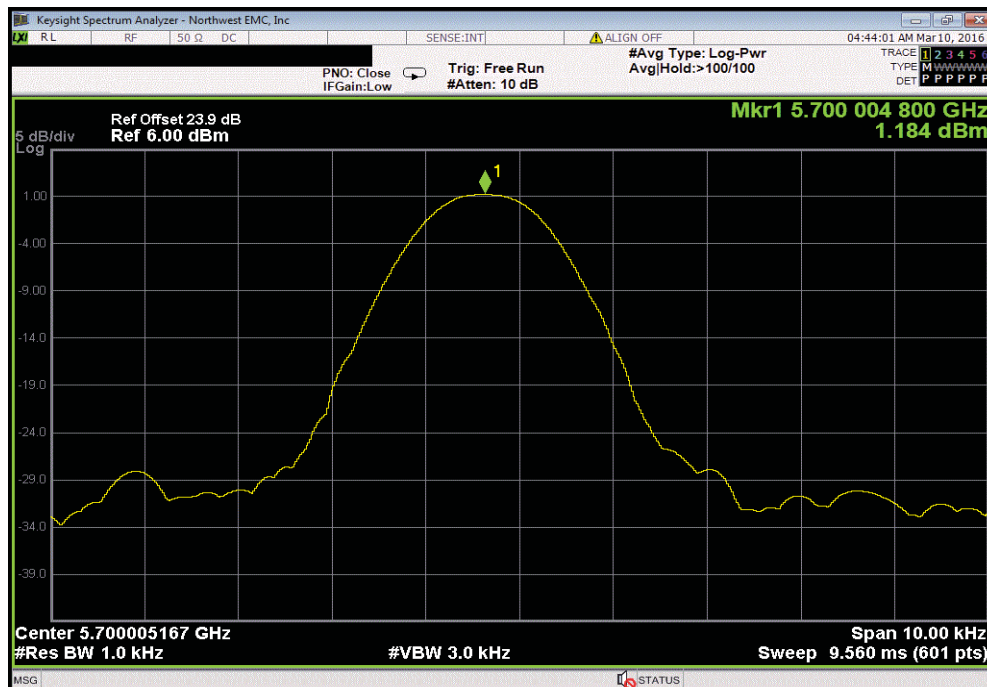


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Voltage: 115% | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.0047 | 5700 | 0.8 | 100 | Pass | |

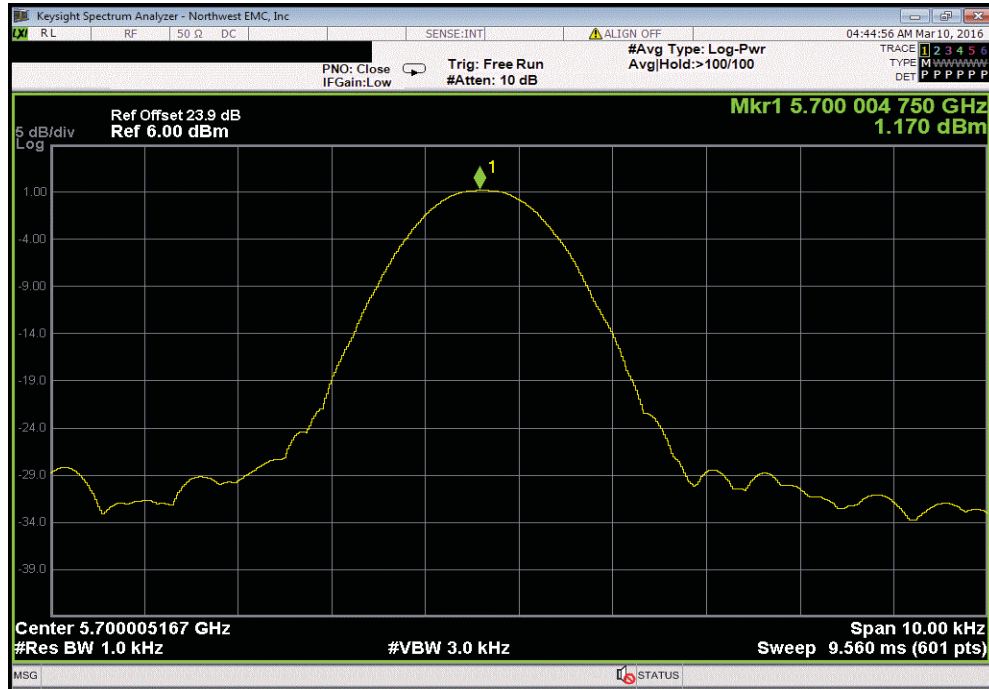


| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Voltage: 100% | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.0048 | 5700 | 0.8 | 100 | Pass | |

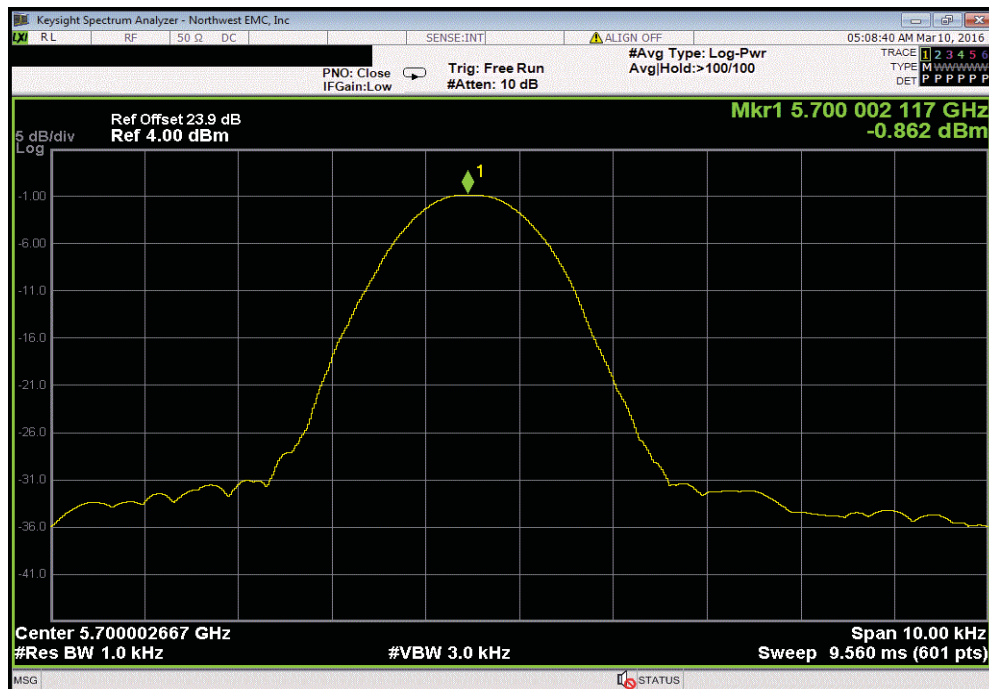


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Voltage: 85% | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.00475 | 5700 | 0.8 | 100 | Pass | |

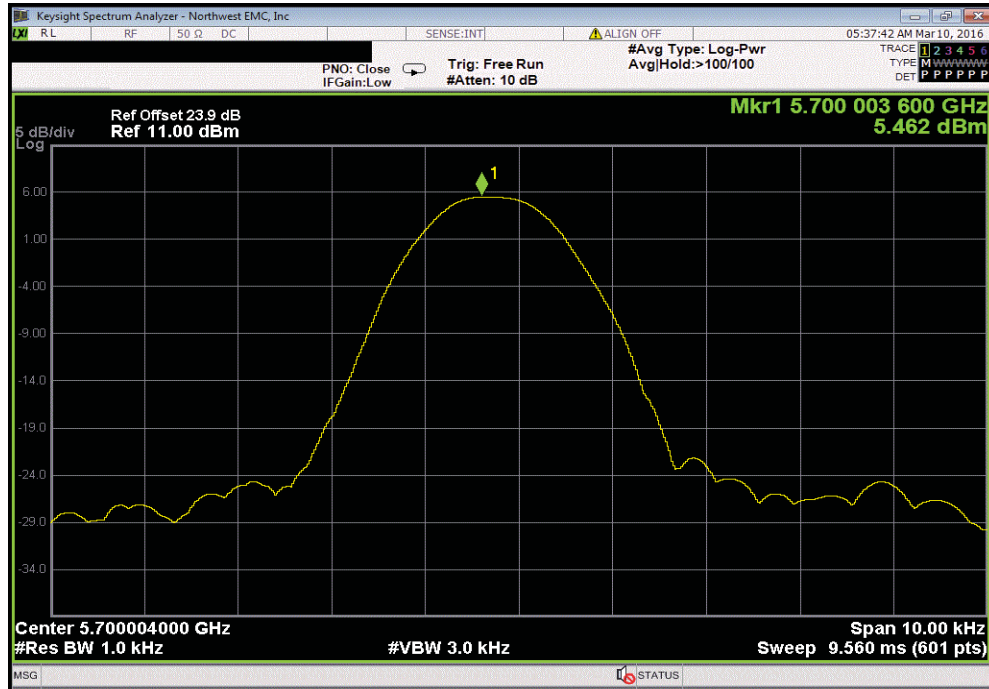


| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +50° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.002117 | 5700 | 0.4 | 100 | Pass | |

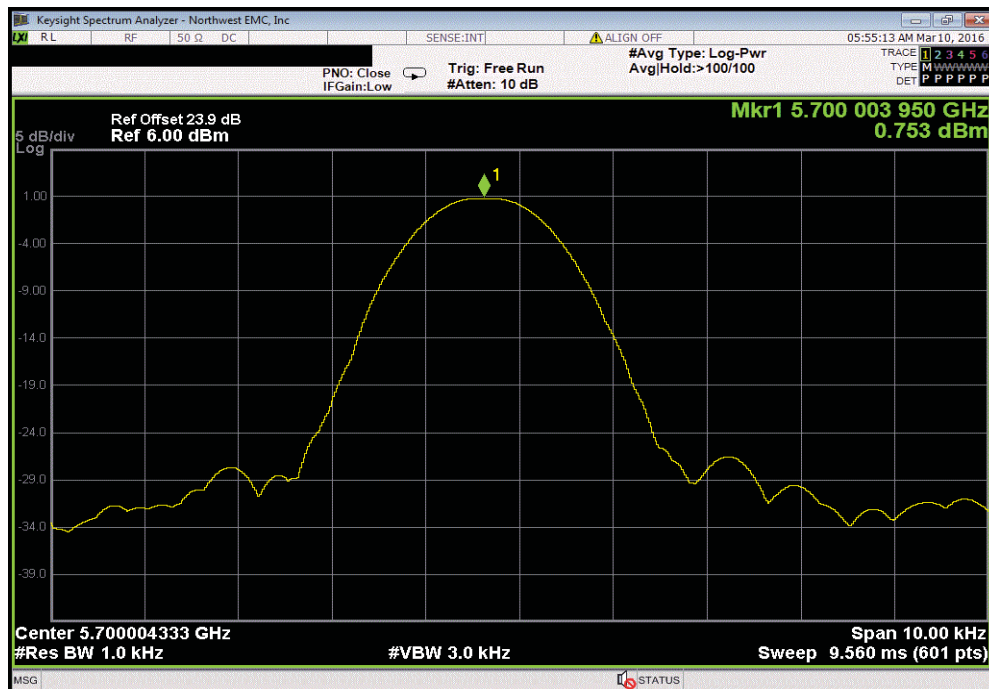


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +40° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.0036 | 5700 | 0.6 | 100 | Pass | |

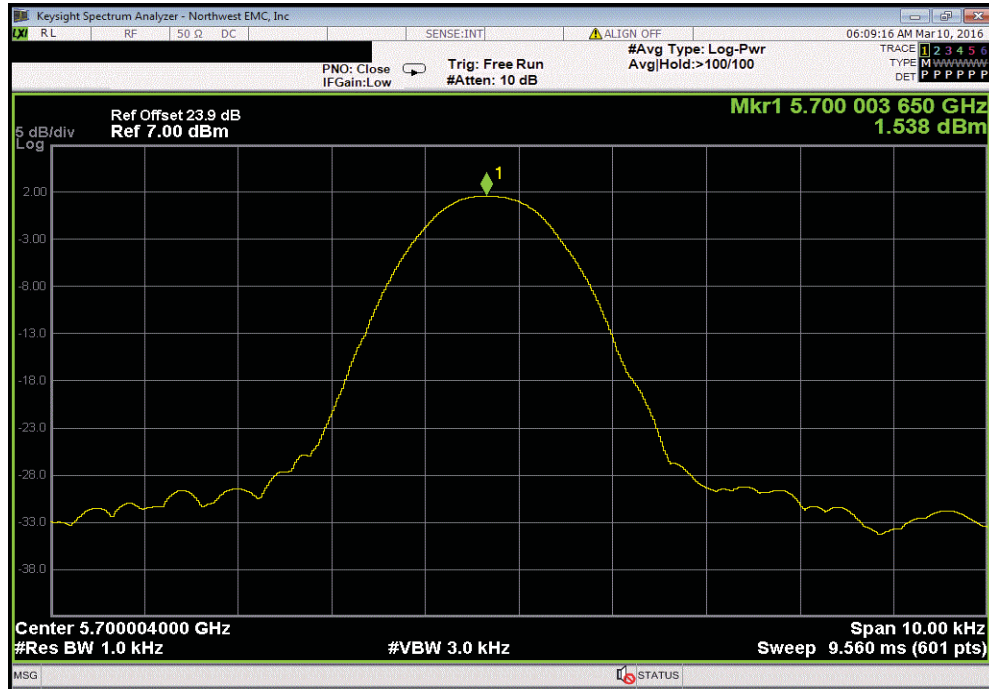


| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +30° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.00395 | 5700 | 0.7 | 100 | Pass | |

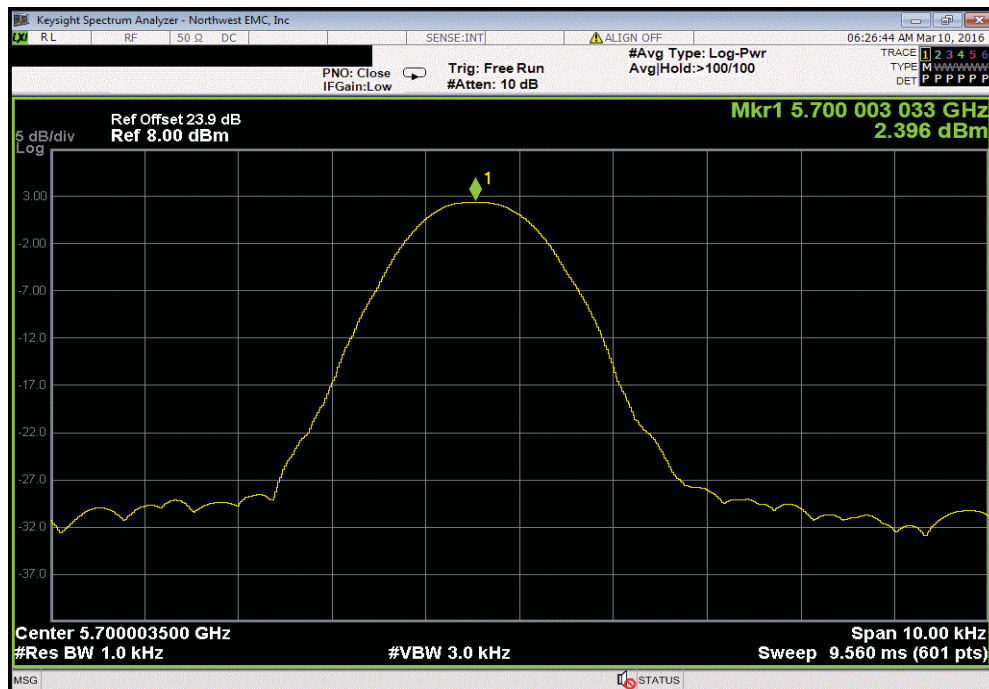


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +20° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.00365 | 5700 | 0.6 | 100 | Pass | |

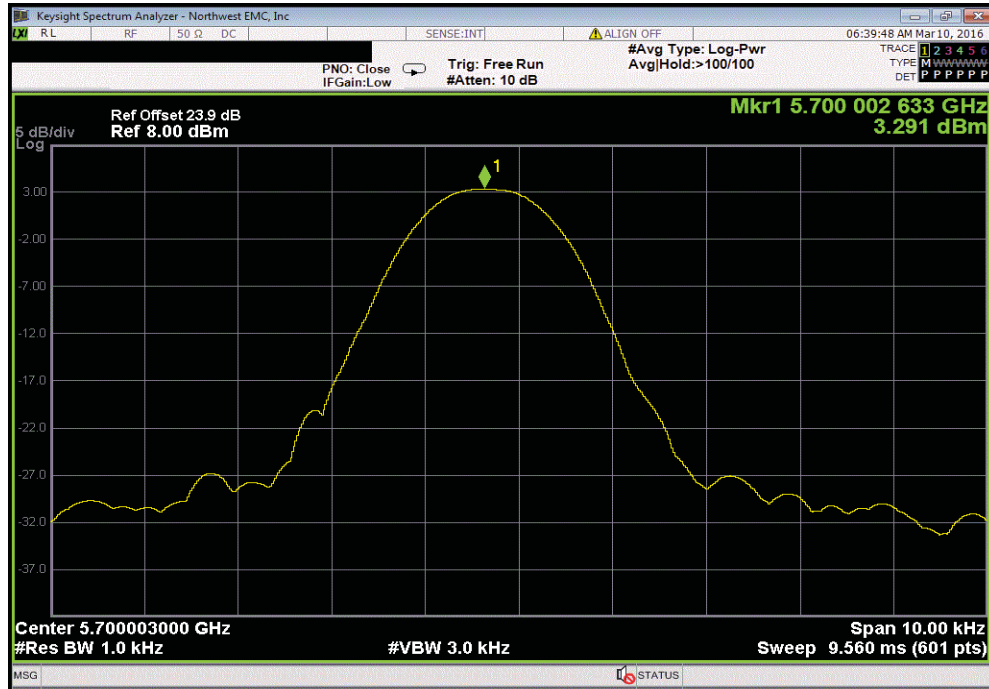


| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: +10° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.003033 | 5700 | 0.5 | 100 | Pass | |

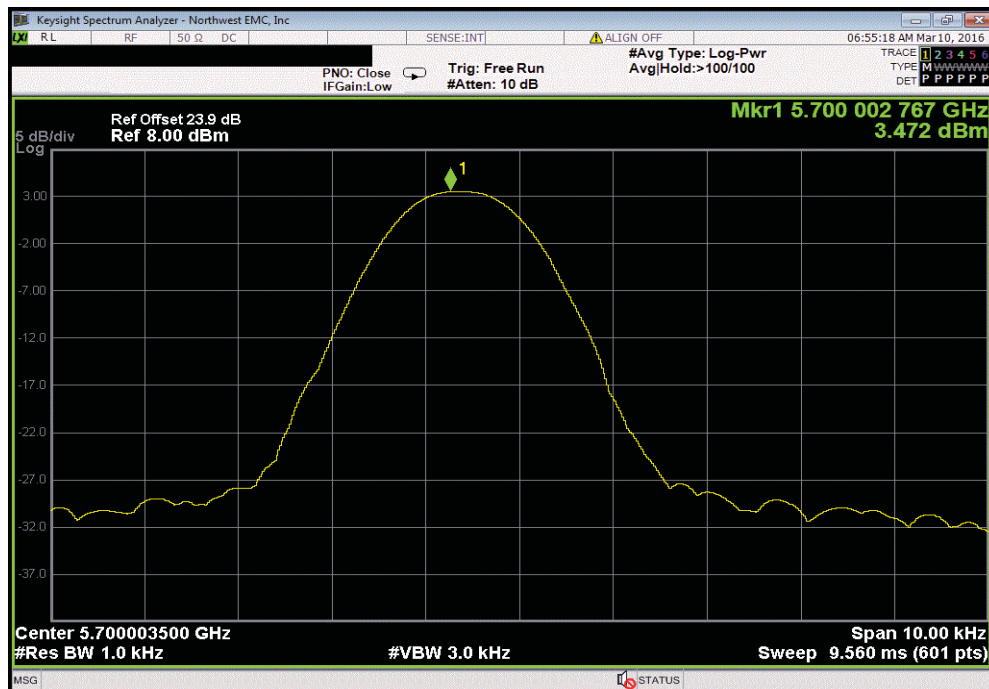


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: 0° | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
| | 5700.002633 | 5700 | 0.5 | 100 | Pass |

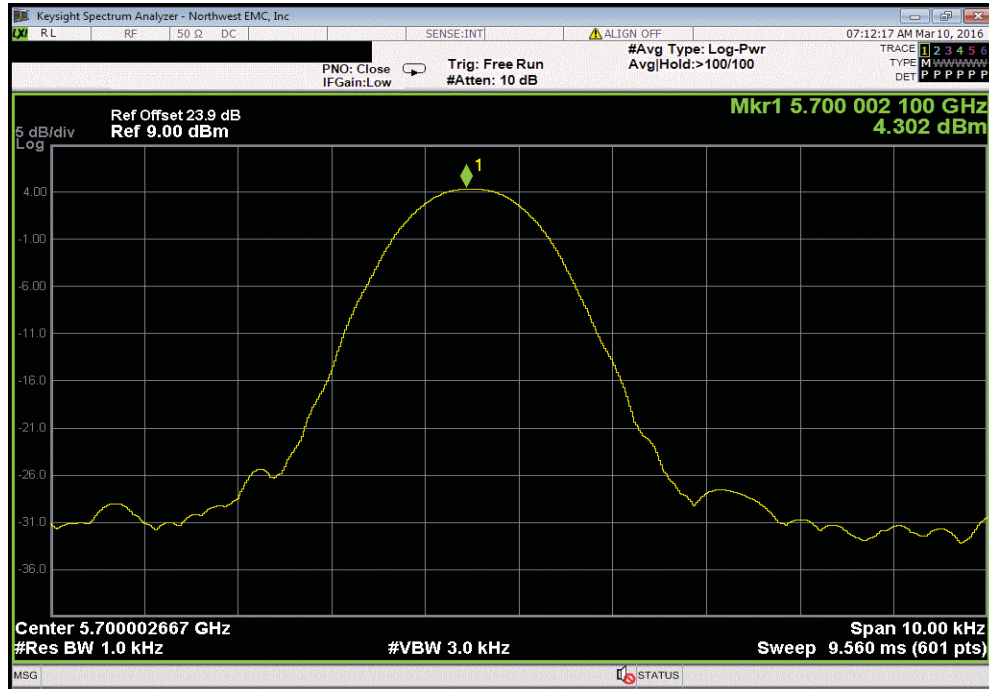


| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: -10° | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
| | 5700.002767 | 5700 | 0.5 | 100 | Pass |

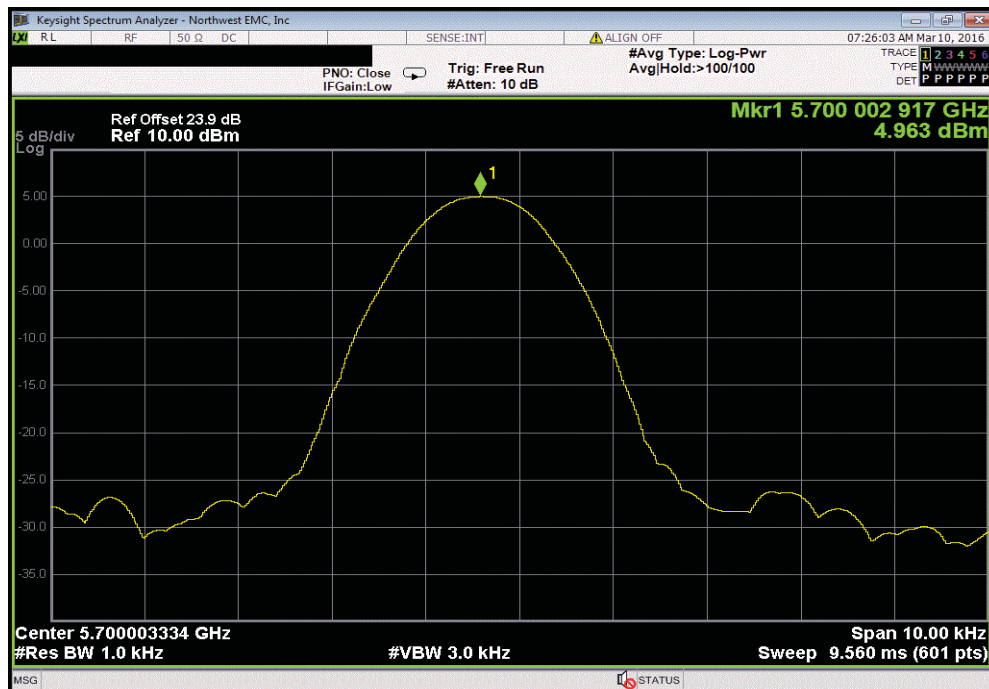


FREQUENCY STABILITY

| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: -20° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.0021 | 5700 | 0.4 | 100 | Pass | |

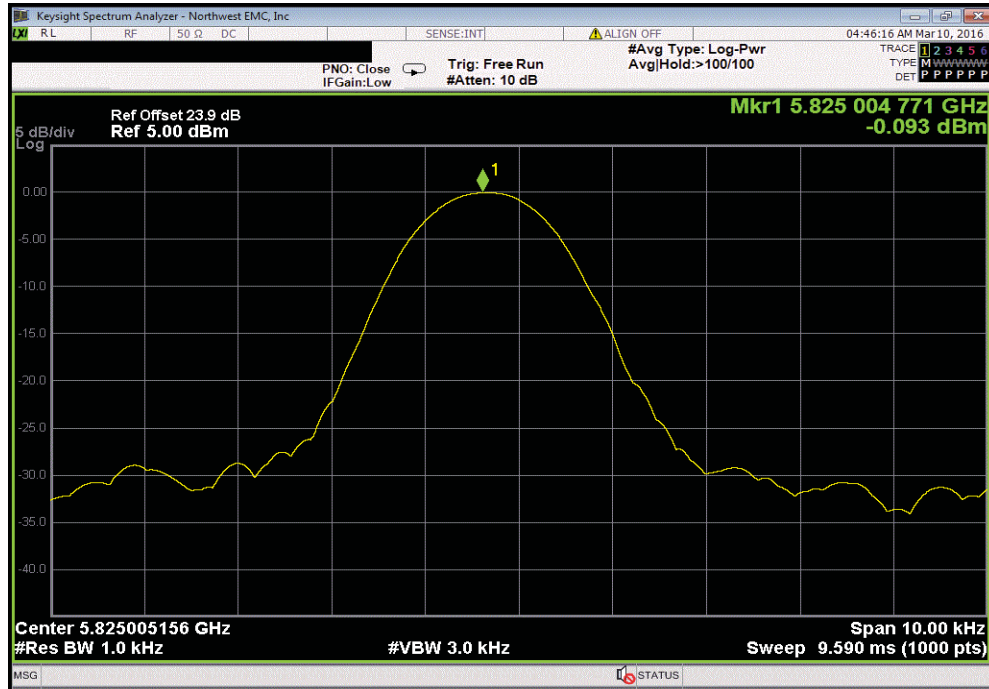


| 5470 MHz - 5725 MHz - High Channel, 5700 MHz, Temperature: -30° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5700.002917 | 5700 | 0.5 | 100 | Pass | |

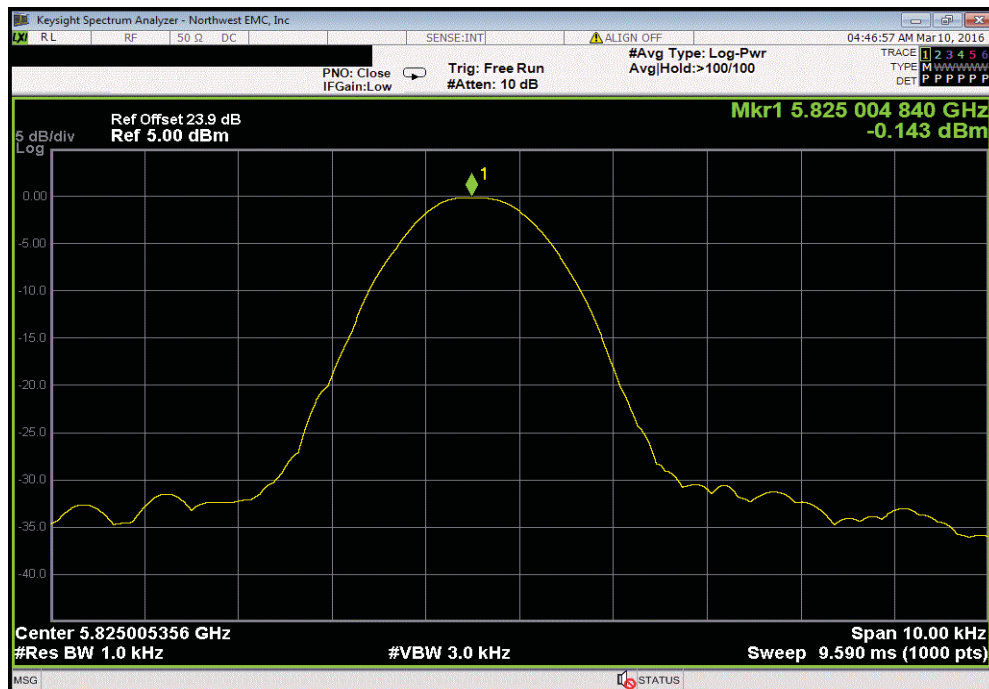


FREQUENCY STABILITY

| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Voltage: 115% | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
| | 5825.004771 | 5825 | 0.8 | 100 | Pass |

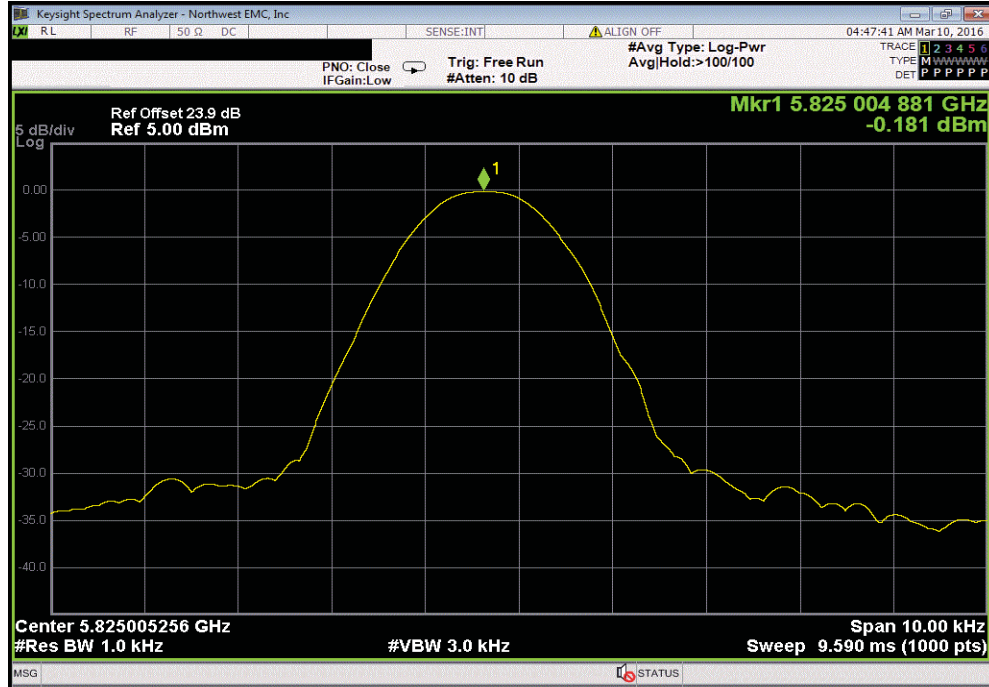


| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Voltage: 100% | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
| | 5825.00484 | 5825 | 0.8 | 100 | Pass |

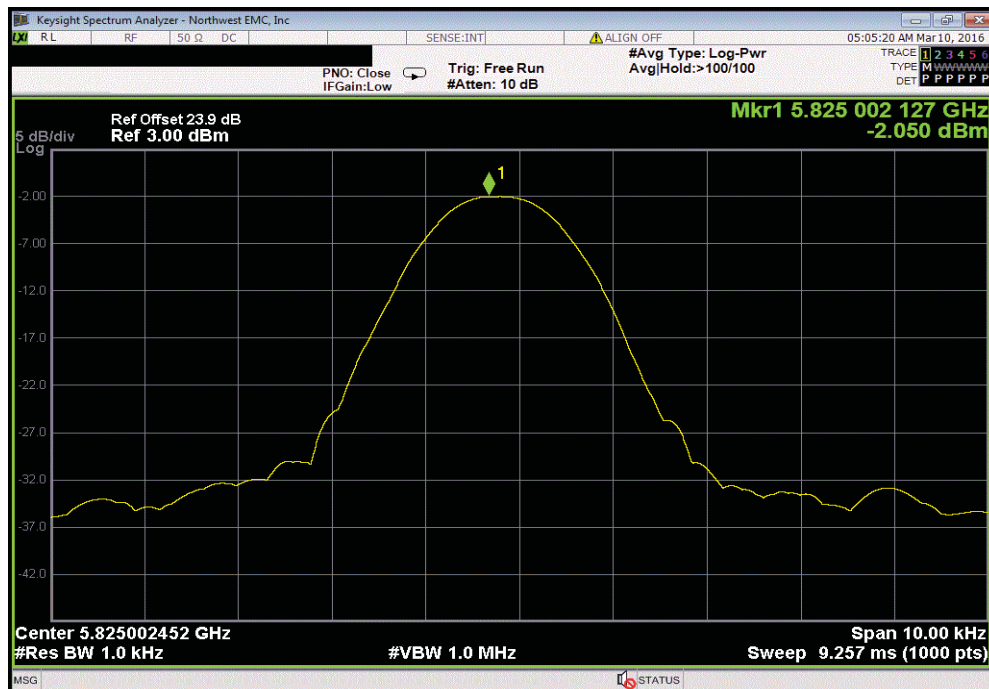


FREQUENCY STABILITY

| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Voltage: 85% | | | | | | |
|--|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.004881 | 5825 | 0.8 | 100 | Pass | |

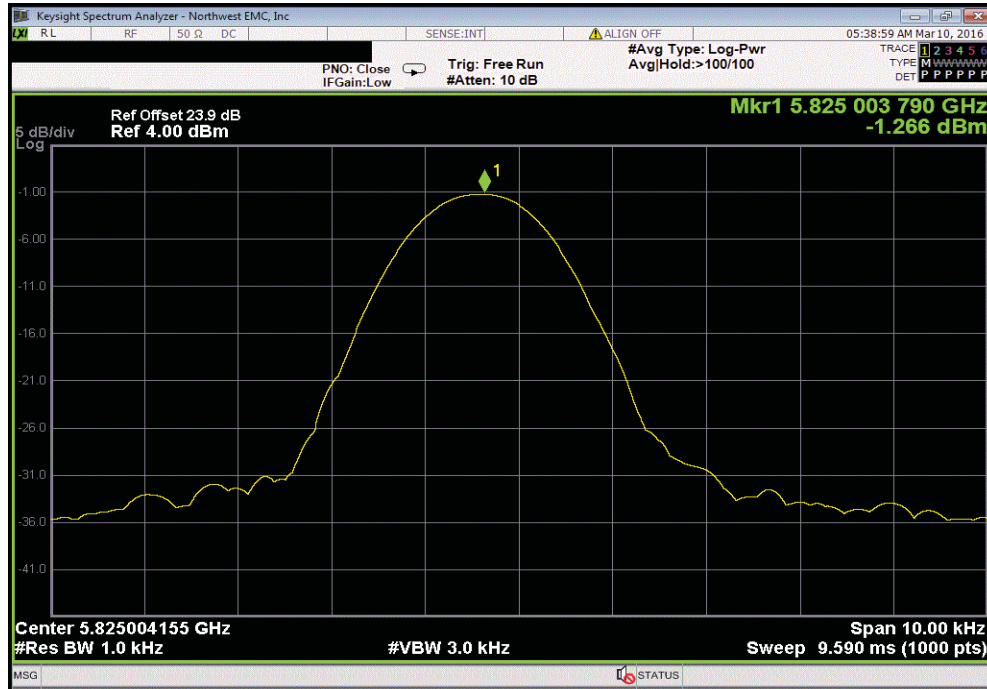


| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: +50° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.002127 | 5825 | 0.4 | 100 | Pass | |

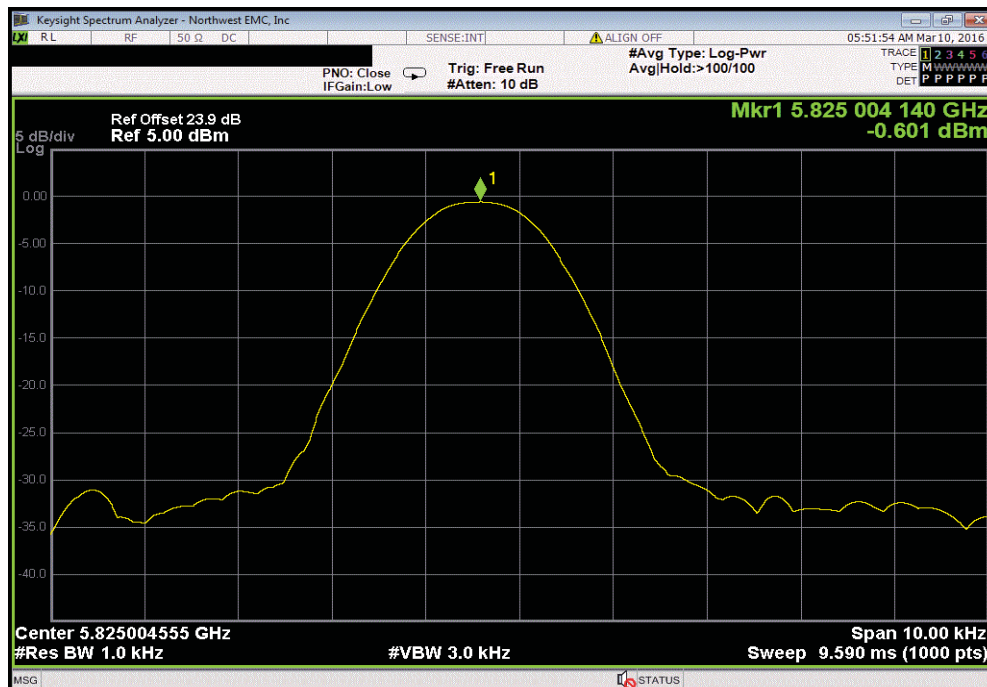


FREQUENCY STABILITY

| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: +40° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.00379 | 5825 | 0.7 | 100 | Pass | |



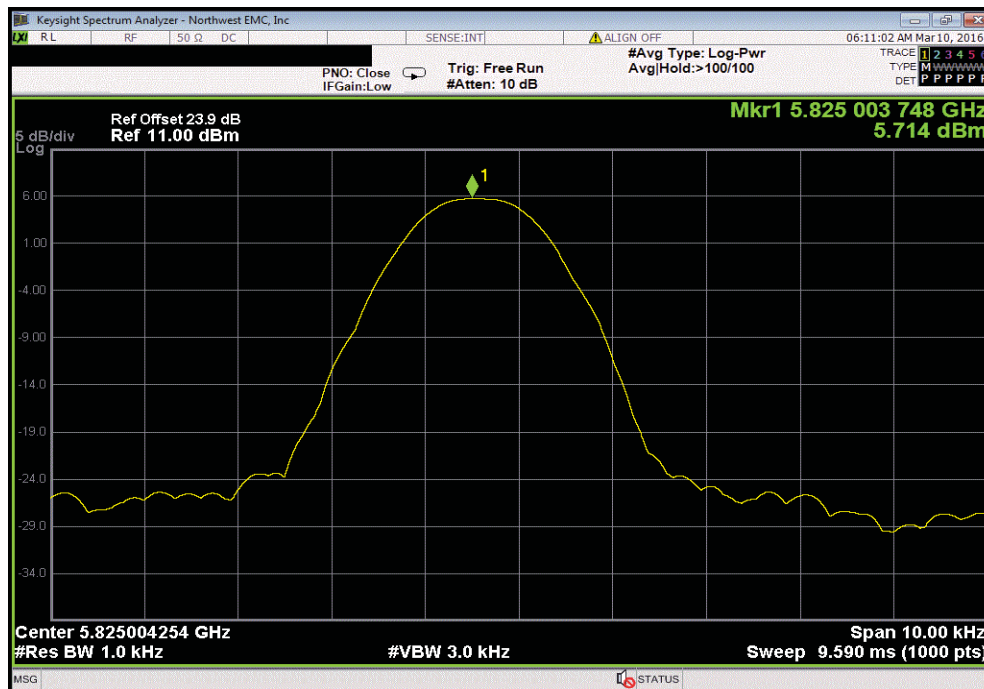
| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: +30° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.00414 | 5825 | 0.7 | 100 | Pass | |



FREQUENCY STABILITY

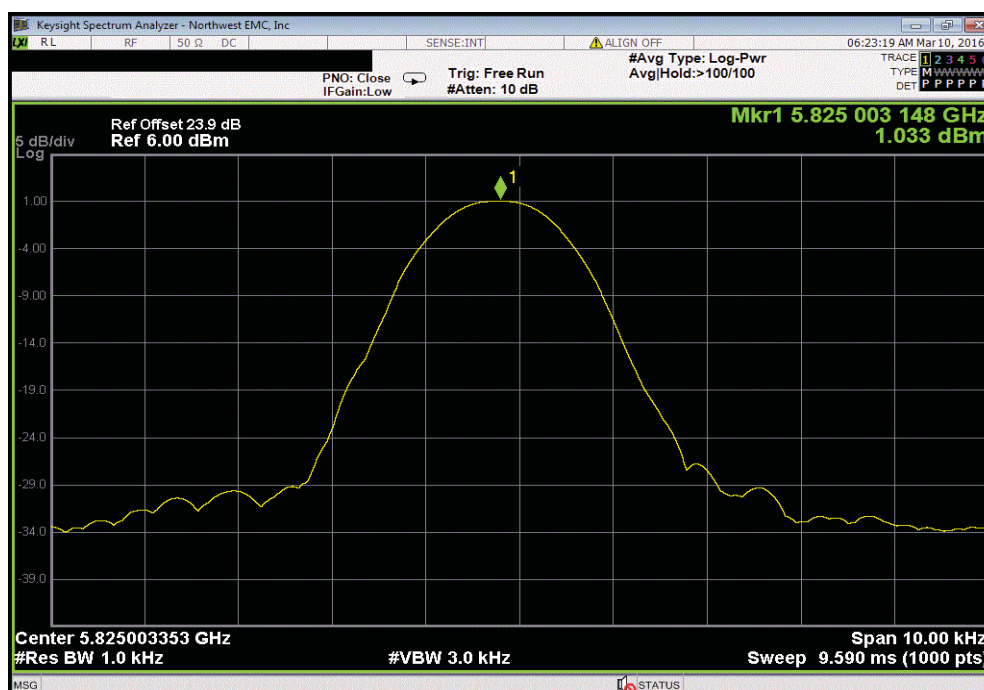
5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: +20°

| Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
|----------------------|----------------------|-------------|-------------|---------|
| 5825.003748 | 5825 | 0.6 | 100 | Pass |



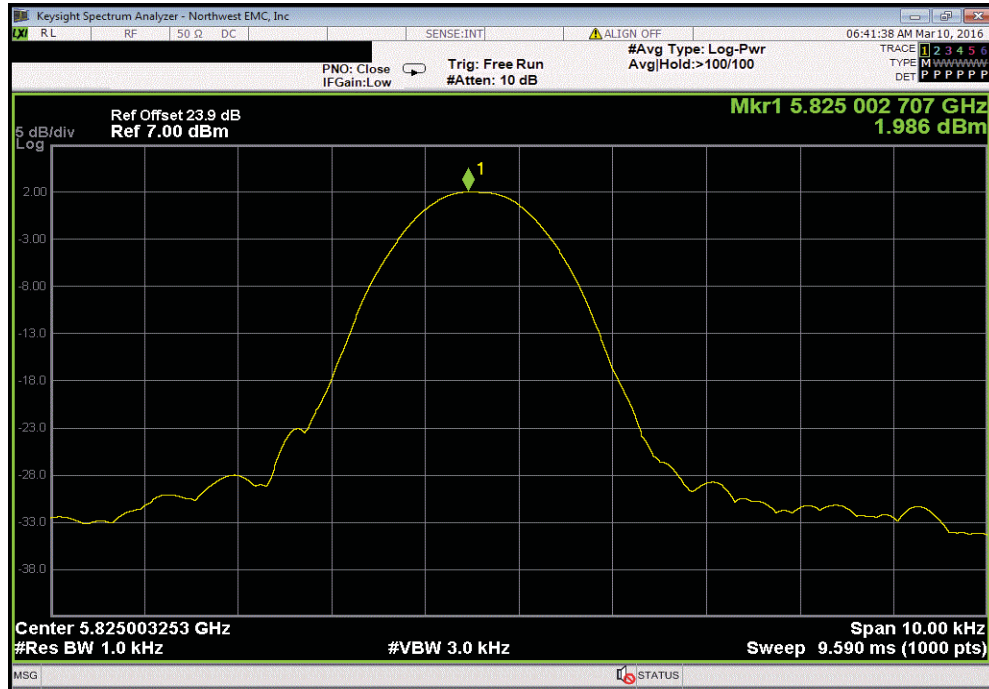
5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: +10°

| Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results |
|----------------------|----------------------|-------------|-------------|---------|
| 5825.003148 | 5825 | 0.5 | 100 | Pass |

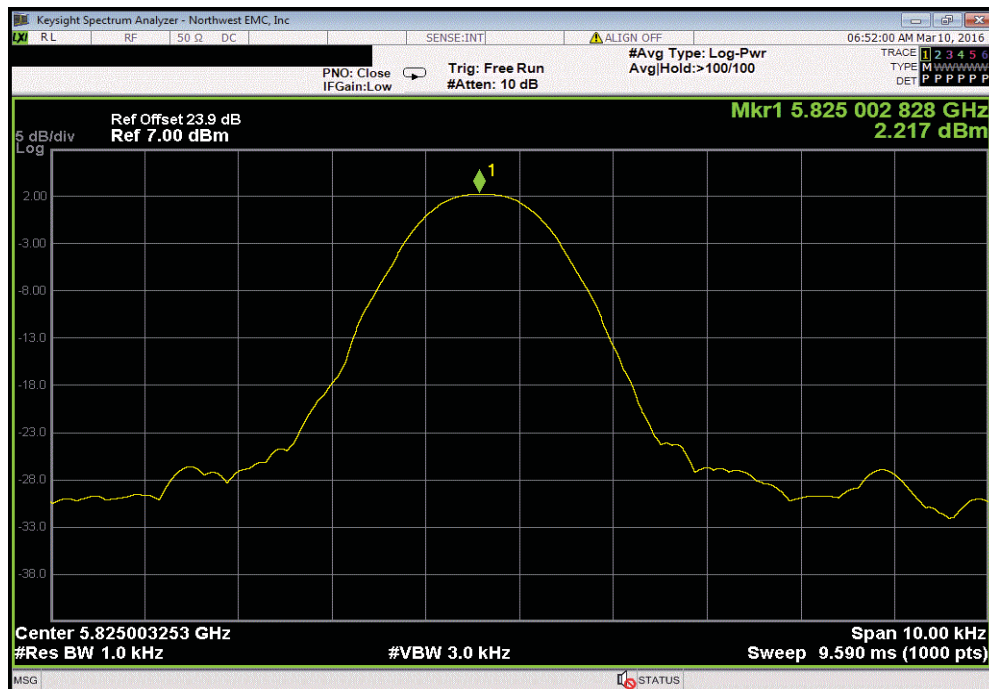


FREQUENCY STABILITY

| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: 0° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.002707 | 5825 | 0.5 | 100 | Pass | |

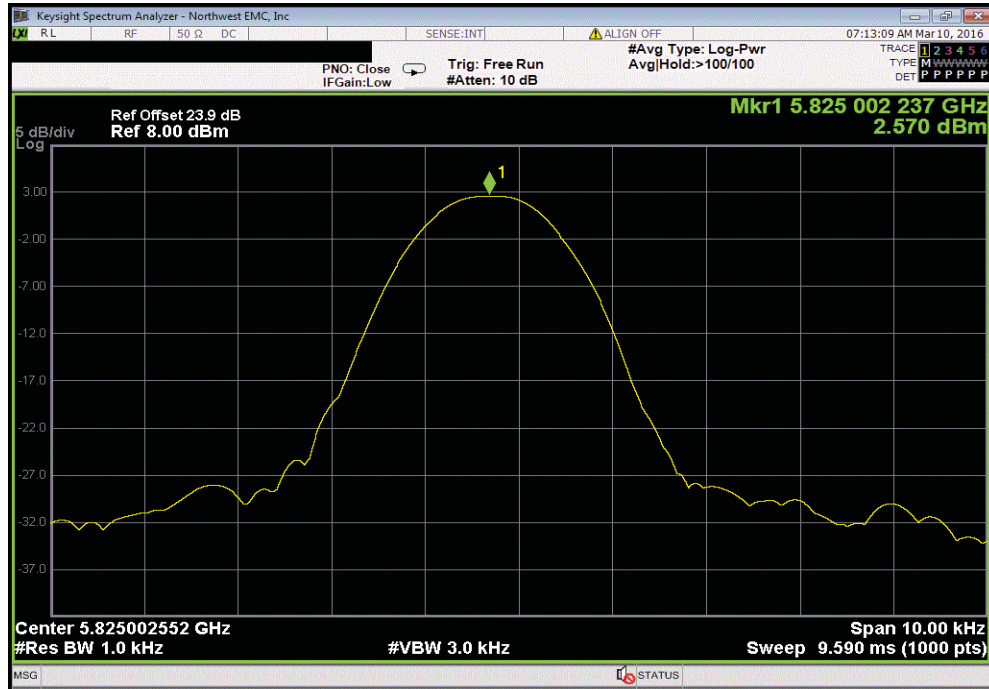


| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: -10° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.002828 | 5825 | 0.5 | 100 | Pass | |



FREQUENCY STABILITY

| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: -20° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.002237 | 5825 | 0.4 | 100 | Pass | |



| 5725 MHz - 5850 MHz - High Channel, 5825 MHz, Temperature: -30° | | | | | | |
|---|----------------------|----------------------|-------------|-------------|---------|--|
| | Measured Value (MHz) | Assigned Value (MHz) | Error (ppm) | Limit (ppm) | Results | |
| | 5825.002808 | 5825 | 0.5 | 100 | Pass | |

