



element

WatchGuard Video

VISTA XLT

FCC 15.247:2018

2.4GHz Band Single Channel DTS Radio

Report # WTVD0014.1



NVLAP LAB CODE: 201049-0



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CERTIFICATE OF TEST



Last Date of Test: November 9, 2018
WatchGuard Video
Model: VISTA XLT

Radio Equipment Testing

Standards

| Specification | Method |
|-----------------|------------------------------|
| FCC 15.247:2018 | ANSI C63.10:2013, KDB 558074 |

Results

| Method Clause | Test Description | Applied | Results | Comments |
|-------------------------------|-------------------------------------|---------|---------|---|
| 6.2 | Powerline Conducted Emissions | No | N/A | Not required for a battery powered EUT. |
| 11.12.1, 11.13.2, 6.5, 6.6 | Spurious Radiated Emissions | Yes | Pass | |
| 11.6 | Duty Cycle | Yes | Pass | |
| 11.8.2 | Occupied Bandwidth | Yes | Pass | |
| 11.9.2.2.4 | Output Power | Yes | Pass | |
| 11.9.2.2.4 | Equivalent Isotropic Radiated Power | Yes | Pass | |
| 11.10.2 | Power Spectral Density | Yes | Pass | |
| 11.11 | Band Edge Compliance | Yes | Pass | |
| 11.11 | Spurious Conducted Emissions | Yes | Pass | |

Deviations From Test Standards

None

Approved By:

Jeremiah Darden, 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. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY



| Revision Number | Description | Date (yyyy-mm-dd) | 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 Element to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

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

European Union

European Commission – Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

Australia/New Zealand

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

Korea

MSIT / 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

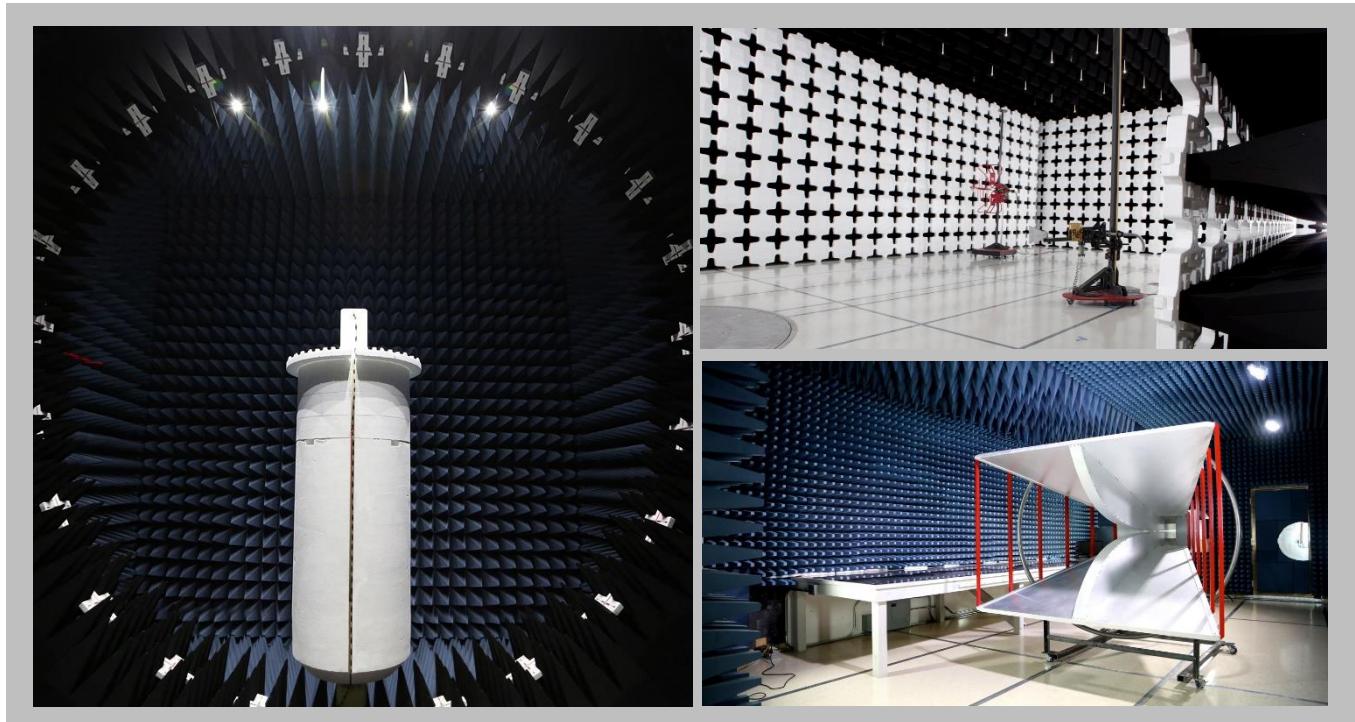
For details on the Scopes of our Accreditations, please visit:

<https://www.nwemc.com/emc-testing-accreditations>

FACILITIES



| California Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918 | Minnesota Labs MN01-10 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 6775 NE Evergreen Pkwy #400 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 |
| Innovation, Science and Economic Development Canada | | | | | |
| 2834B-1, 2834B-3 | 2834E-1, 2834E-3 | N/A | 2834D-1, 2834D-2 | 2834G-1 | 2834F-1 |
| BSMI | | | | | |
| SL2-IN-E-1154R | SL2-IN-E-1152R | N/A | SL2-IN-E-1017 | SL2-IN-E-1158R | SL2-IN-E-1153R |
| VCCI | | | | | |
| A-0029 | A-0109 | N/A | A-0108 | A-0201 | A-0110 |
| Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA | | | | | |
| US0158 | US0175 | N/A | US0017 | US0191 | US0157 |



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.

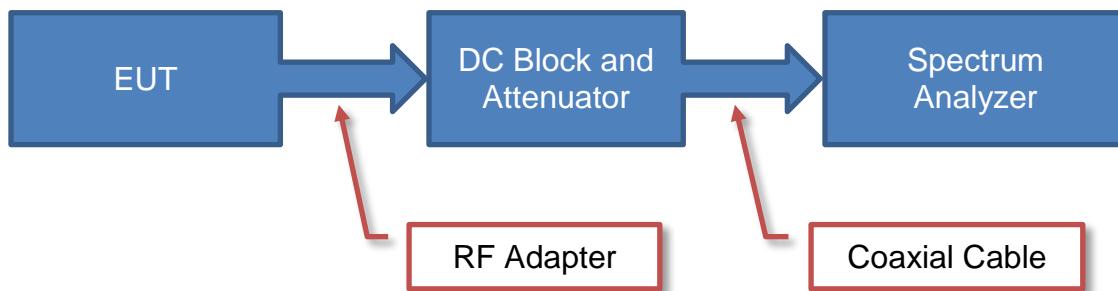
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty ($K=2$) can be found included as part of the applicable test description page. 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.

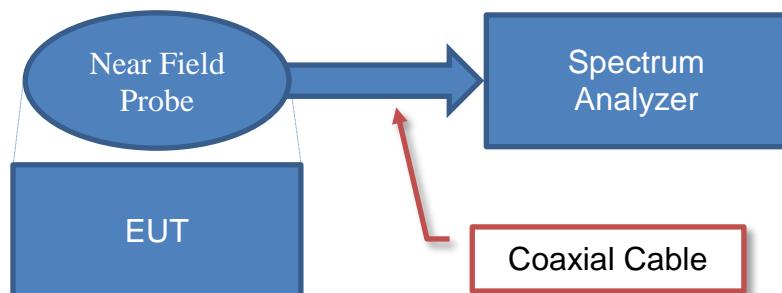
| Test | + MU | - MU |
|---------------------------------------|---------|----------|
| Frequency Accuracy (Hz) | 0.0007% | -0.0007% |
| Amplitude Accuracy (dB) | 1.2 dB | -1.2 dB |
| Conducted Power (dB) | 0.3 dB | -0.3 dB |
| Radiated Power via Substitution (dB) | 0.7 dB | -0.7 dB |
| Temperature (degrees 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) | 5.1 dB | -5.1 dB |
| AC Powerline Conducted Emissions (dB) | 2.4 dB | -2.4 dB |

Test Setup Block Diagrams

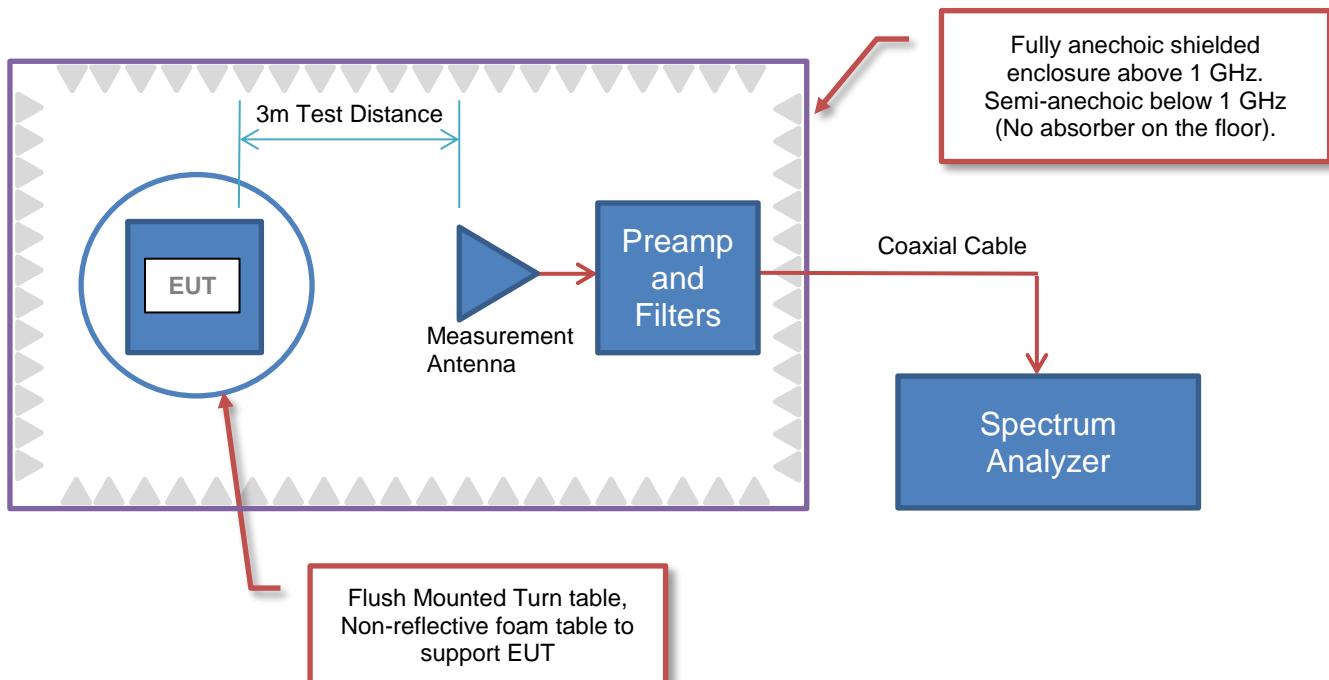
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION



Client and Equipment Under Test (EUT) Information

| | |
|---------------------------------|---------------------------|
| Company Name: | WatchGuard Video |
| Address: | 415 East Exchange Parkway |
| City, State, Zip: | Allen, TX 75002 |
| Test Requested By: | Navaid Karimi |
| Model: | Vista XLT |
| First Date of Test: | November 8, 2018 |
| Last Date of Test: | November 9, 2018 |
| Receipt Date of Samples: | November 8, 2018 |
| Equipment Design Stage: | Prototype |
| Equipment Condition: | No Damage |
| Purchase Authorization: | Verified |

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

Body cam for law enforcement with single channel wireless link (Same as VISTA but with belt clip and cabled camera)

Testing Objective:

To demonstrate compliance of the single channel DTS radio under FCC 15.247 for operation in the 2.4 GHz band.



POWER SETTINGS

The EUT was tested using the power settings provided by the manufacturer:

SETTINGS FOR ALL TESTS IN THIS REPORT

| Modulation Types | Channel Bandwidths | Channel | Position | Frequency (MHz) | Power Setting |
|------------------|--------------------|---------|----------------|-----------------|---------------|
| 6 Mbps | 20 | 6 | Single Channel | 2437 | 20000 (Max) |
| 36 Mbps | 20 | 6 | Single Channel | 2437 | 20000 (Max) |
| 54 Mbps | 20 | 6 | Single Channel | 2437 | 20000 (Max) |
| MCS0 | 20 | 6 | Single Channel | 2437 | 20000 (Max) |
| MCS4 | 20 | 6 | Single Channel | 2437 | 20000 (Max) |
| MCS7 | 20 | 6 | Single Channel | 2437 | 20000 (Max) |

CONFIGURATIONS

Configuration WTVD0014- 1

| EUT | | | |
|--|------------------|-------------------|-------------------------|
| Description | Manufacturer | Model/Part Number | Serial Number |
| Body Camera with WiFi Link (Body Sensor) | WatchGuard Video | VISTA XLT | VXL1-001324 XBC1-001149 |

Configuration WTVD0014- 2

| EUT | | | |
|---|------------------|-------------------|-------------------------|
| Description | Manufacturer | Model/Part Number | Serial Number |
| Body Camera with WiFi Link (Direct Connect) | WatchGuard Video | VISTA XLT | VXL1-000683 XBC1-001149 |

| Peripherals in test setup boundary | | | |
|------------------------------------|------------------|-------------------|---------------|
| Description | Manufacturer | Model/Part Number | Serial Number |
| Laptop Computer | Dell | Latitude 7480 | 27904748150 |
| Command Console Board | WatchGuard Video | WGA00341 | 0615413600 |
| Charging Base | WatchGuard Video | WGA00537 | VHB1-05863 |
| AC/DC Power Supply (Base) | Unknown | M120100A0 | None |

| Cables | | | | | |
|-----------------|--------|------------|---------|---------------------------|-----------------------|
| Cable Type | Shield | Length (m) | Ferrite | Connection 1 | Connection 2 |
| DC Power (Base) | No | 1.5m | No | AC/DC Power Supply (Base) | Charging Base |
| USB to RS-232 | Yes | 0.5m | No | Laptop Computer | Command Console Board |

MODIFICATIONS



Equipment Modifications

| Item | Date | Test | Modification | Note | Disposition of EUT |
|------|------------|-------------------------------------|--------------------------------------|---|---|
| 1 | 2018-11-08 | Spurious Radiated Emissions | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 2 | 2018-11-09 | Duty Cycle | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 3 | 2018-11-09 | Occupied Bandwidth | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 4 | 2018-11-09 | Output Power | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 5 | 2018-11-09 | Equivalent Isotropic Radiated Power | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 6 | 2018-11-09 | Power Spectral Density | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 7 | 2018-11-09 | Band Edge Compliance | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Element following the test. |
| 8 | 2018-11-09 | Spurious Conducted Emissions | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | Scheduled testing was completed. |

SPURIOUS RADIATED EMISSIONS



PSA-ESCI 2018.07.27

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

MODES OF OPERATION

Continuously Transmitting at Single Channel 6, 2437 MHz

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

WTVD0014 - 1

FREQUENCY RANGE INVESTIGATED

| | | | |
|-----------------|--------|----------------|-----------|
| Start Frequency | 30 MHz | Stop Frequency | 26500 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 |
|------------------------------|--------------------|------------------------|-----|-------------|----------|
| Attenuator | Weinschel Corp | 4H-20 | AWB | 16-Mar-2018 | 12 mo |
| Filter - High Pass | Micro-Tronics | HPM50111 | HGC | 16-Mar-2018 | 12 mo |
| Filter - Low Pass | Micro-Tronics | LPM50004 | HHV | 3-Aug-2018 | 12 mo |
| Amplifier - Pre-Amplifier | Miteq | JSDWK42-18004000-60-5P | PAM | 10-Oct-2018 | 12 mo |
| Antenna - Double Ridge | A.H. Systems, Inc. | SAS-574 | AXW | 21-Aug-2018 | 24 mo |
| Cable | Northwest EMC | 18-40GHz | TXE | 10-Oct-2018 | 12 mo |
| Amplifier - Pre-Amplifier | Miteq | AMF-6F-12001800-30-10P | PAL | 9-Oct-2018 | 12 mo |
| Antenna - Standard Gain | ETS Lindgren | 3160-08 | AJG | NCR | 0 mo |
| Amplifier - Pre-Amplifier | Miteq | AMF-6F-08001200-30-10P | PAK | 9-Oct-2018 | 12 mo |
| Antenna - Standard Gain | ETS Lindgren | 3160-07 | AJF | NCR | 0 mo |
| Cable | Northwest EMC | 8-18GHz | TXD | 31-May-2018 | 12 mo |
| Amplifier - Pre-Amplifier | Miteq | AMF-3D-00100800-32-13P | PAJ | 31-May-2018 | 12 mo |
| Antenna - Double Ridge | ETS Lindgren | 3115 | AJL | 11-Oct-2018 | 24 mo |
| Cable | Northwest EMC | 1-8.2 GHz | TXC | 31-May-2018 | 12 mo |
| Amplifier - Pre-Amplifier | Miteq | AM-1551 | AVK | 31-May-2018 | 12 mo |
| Antenna - Biconilog | ETS Lindgren | 3143B | AYF | 10-May-2018 | 24 mo |
| Cable | Northwest EMC | RE 9kHz - 1GHz | TXB | 22-Aug-2018 | 12 mo |
| Analyzer - Spectrum Analyzer | Agilent | N9010A | AFL | 15-Mar-2018 | 12 mo |

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These "pre-scans" are not included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual 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 if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector

PK = Peak Detector

AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements at the edges of the allowable band may be presented in an alternative method as provided for in the ANSI C63.10 Marker-Delta method. This method involves performing an in-band fundamental measurement followed by a screen capture of the fundamental and out-of-band emission using reduced measurement instrumentation bandwidths. The amplitude delta measured on this screen capture is applied to the fundamental emission value to show the out-of-band emission level as applied to the limit.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(d_c)$.

SPURIOUS RADIATED EMISSIONS



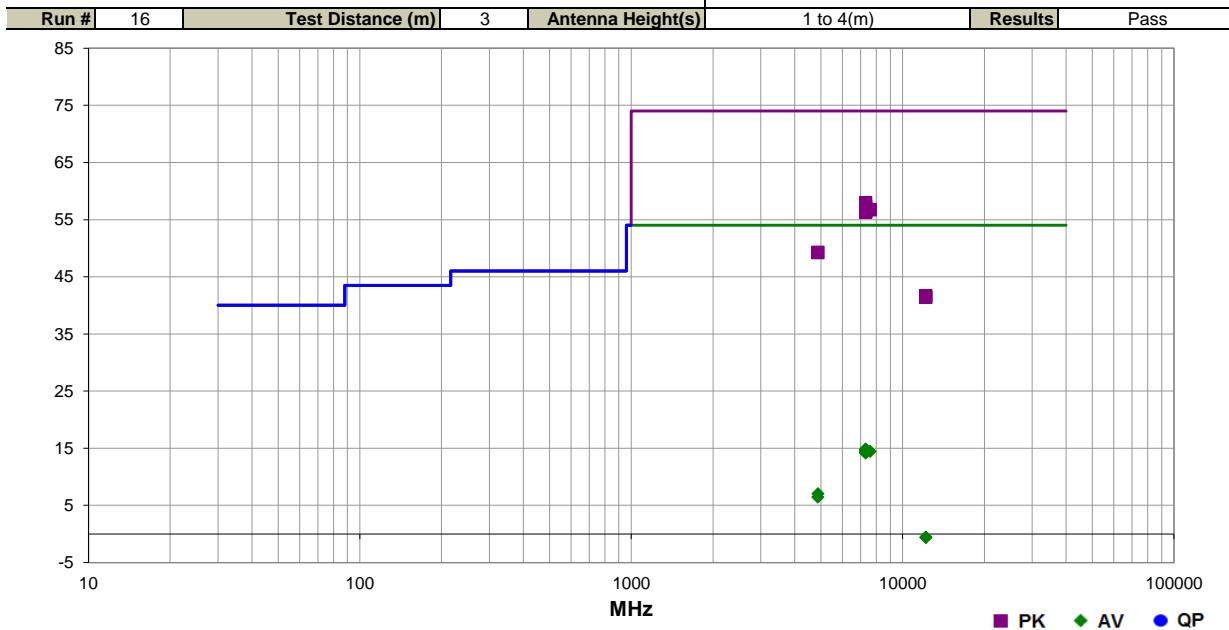
EmiR5 2018.09.26 PSA-ESCI 2018.07.27

Jonathan Kiefer

Tested by: Jonathan Kiefer

| | | | | |
|-----------------|--|-------------------|------------|--|
| Work Order: | WTVD0014 | Date: | 8-Nov-2018 | |
| Project: | None | Temperature: | 23.1 °C | |
| Job Site: | TX02 | Humidity: | 45.6% RH | |
| Serial Number: | VXL1-001324 XBC1-001149 | Barometric Pres.: | 1021 mbar | |
| EUT: | VISTA XLT | | | |
| Configuration: | 1 | | | |
| Customer: | WatchGuard Video | | | |
| Attendees: | Navaid Karimi | | | |
| EUT Power: | Battery | | | |
| Operating Mode: | Continuously Transmitting at Single Channel 6, 2437 MHz | | | |
| Deviations: | None | | | |
| Comments: | See comments below for EUT orientation and data rate information. EUT uses integral chip antenna with 2.2 dBi gain. EUT Duty Cycle < 98%, therefore upwardly corrected to 100% using $10 \times \text{LOG}(1/\text{DC})$. Worst-case upward correction factor: $10 \times \text{LOG}(1/0.336) = 4.74 \text{ dB}$. Then downwardly corrected based on duty cycle in final use (1.7%), using $20 \times \text{LOG}(\text{DC})$. Applied overall worst-case DCCF of -30.7 dB to average detector measurements. | | | |

| Test Specifications | Test Method |
|---------------------|------------------|
| FCC 15.247:2018 | ANSI C63.10:2013 |



| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Duty Cycle Correction Factor (dB) | External Attenuation (dB) | Polarity/Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments |
|------------|------------------|-------------|-------------------------|-------------------|-----------------------------------|---------------------------|--------------------------|----------|--------------------------|-------------------|----------------------|------------------------|--------------------------|
| 7311.610 | 43.1 | 14.9 | 1.2 | 196.9 | 0.0 | 0.0 | Horz | PK | 0.0 | 58.0 | 74.0 | -16.0 | EUT Horz, 6 Mbps |
| 7311.805 | 42.4 | 14.9 | 1.2 | 164.0 | 0.0 | 0.0 | Vert | PK | 0.0 | 57.3 | 74.0 | -16.7 | EUT Vert, 6 Mbps |
| 7309.830 | 42.2 | 14.9 | 1.2 | 159.9 | 0.0 | 0.0 | Horz | PK | 0.0 | 57.1 | 74.0 | -16.9 | EUT Horz, MCS4 72.2 Mbps |
| 7309.905 | 42.0 | 14.9 | 1.2 | 337.0 | 0.0 | 0.0 | Horz | PK | 0.0 | 56.9 | 74.0 | -17.1 | EUT On Side, 6 Mbps |
| 7309.595 | 42.0 | 14.9 | 1.2 | 171.9 | 0.0 | 0.0 | Vert | PK | 0.0 | 56.9 | 74.0 | -17.1 | EUT On Side, 6 Mbps |
| 7310.330 | 41.8 | 14.9 | 1.2 | 295.0 | 0.0 | 0.0 | Vert | PK | 0.0 | 56.7 | 74.0 | -17.3 | EUT Horz, 6 Mbps |
| 7312.265 | 41.8 | 14.9 | 1.2 | 298.9 | 0.0 | 0.0 | Horz | PK | 0.0 | 56.7 | 74.0 | -17.3 | EUT Vert, 6 Mbps |
| 7593.755 | 41.5 | 15.2 | 1.2 | 196.9 | 0.0 | 0.0 | Vert | PK | 0.0 | 56.7 | 74.0 | -17.3 | EUT Horz, 6 Mbps |
| 7312.400 | 41.6 | 14.9 | 1.2 | 19.0 | 0.0 | 0.0 | Horz | PK | 0.0 | 56.5 | 74.0 | -17.5 | EUT Horz, MCS0 7.2 Mbps |
| 7312.145 | 41.6 | 14.9 | 1.2 | 288.0 | 0.0 | 0.0 | Horz | PK | 0.0 | 56.5 | 74.0 | -17.5 | EUT Horz, MCS4 33.3 Mbps |
| 7312.240 | 41.5 | 14.9 | 1.2 | 105.9 | 0.0 | 0.0 | Horz | PK | 0.0 | 56.4 | 74.0 | -17.6 | EUT Horz, 54 Mbps |
| 7310.950 | 41.4 | 14.9 | 1.2 | 136.9 | 0.0 | 0.0 | Horz | PK | 0.0 | 56.3 | 74.0 | -17.7 | EUT Horz, 36 Mbps |
| 4873.525 | 42.3 | 7.0 | 1.2 | 3.0 | 0.0 | 0.0 | Vert | PK | 0.0 | 49.3 | 74.0 | -24.7 | EUT Horz, 6 Mbps |
| 4872.990 | 42.2 | 7.0 | 1.2 | 190.9 | 0.0 | 0.0 | Horz | PK | 0.0 | 49.2 | 74.0 | -24.8 | EUT Horz, 6 Mbps |
| 12185.590 | 42.3 | -0.6 | 1.2 | 198.0 | 0.0 | 0.0 | Vert | PK | 0.0 | 41.7 | 74.0 | -32.3 | EUT Horz, 6 Mbps |
| 12183.640 | 42.0 | -0.6 | 1.2 | 165.9 | 0.0 | 0.0 | Horz | PK | 0.0 | 41.4 | 74.0 | -32.6 | EUT Horz, 6 Mbps |
| 7312.110 | 30.6 | 14.9 | 1.2 | 196.9 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.9 | 54.0 | -39.2 | EUT Horz, 6 Mbps |
| 7311.780 | 30.5 | 14.9 | 1.2 | 298.9 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.8 | 54.0 | -39.3 | EUT Vert, 6 Mbps |
| 7312.040 | 30.5 | 14.9 | 1.2 | 337.0 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.8 | 54.0 | -39.3 | EUT On Side, 6 Mbps |
| 7312.125 | 30.4 | 14.9 | 1.2 | 295.0 | -30.7 | 0.0 | Vert | AV | 0.0 | 14.7 | 54.0 | -39.4 | EUT Horz, 6 Mbps |
| 7312.000 | 30.3 | 14.9 | 1.2 | 164.0 | -30.7 | 0.0 | Vert | AV | 0.0 | 14.6 | 54.0 | -39.5 | EUT Vert, 6 Mbps |
| 7310.850 | 30.3 | 14.9 | 1.2 | 171.9 | -30.7 | 0.0 | Vert | AV | 0.0 | 14.6 | 54.0 | -39.5 | EUT On Side, 6 Mbps |
| 7595.550 | 29.9 | 15.2 | 1.2 | 196.9 | -30.7 | 0.0 | Vert | AV | 0.0 | 14.5 | 54.0 | -39.6 | EUT Horz, 6 Mbps |
| 7311.010 | 30.1 | 14.9 | 1.2 | 136.9 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.4 | 54.0 | -39.7 | EUT Horz, 36 Mbps |

| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Duty Cycle Correction Factor (dB) | External Attenuation (dB) | Polarity/ Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments |
|---------------|---------------------|----------------|----------------------------|----------------------|--|---------------------------------|---------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|--------------------------|
| 7312.230 | 30.1 | 14.9 | 1.2 | 159.9 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.4 | 54.0 | -39.7 | EUT Horz, MCS7 72.2 Mbps |
| 7312.460 | 30.0 | 14.9 | 1.2 | 19.0 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.3 | 54.0 | -39.8 | EUT Horz, MCS0 7.2 Mbps |
| 7311.970 | 30.0 | 14.9 | 1.2 | 288.0 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.3 | 54.0 | -39.8 | EUT Horz, MCS4 43.3 Mbps |
| 7312.475 | 29.9 | 14.9 | 1.2 | 105.9 | -30.7 | 0.0 | Horz | AV | 0.0 | 14.2 | 54.0 | -39.9 | EUT Horz, 54 Mbps |
| 4873.930 | 30.7 | 7.0 | 1.2 | 3.0 | -30.7 | 0.0 | Vert | AV | 0.0 | 7.1 | 54.0 | -47.0 | EUT Horz, 6 Mbps |
| 4873.265 | 30.1 | 7.0 | 1.2 | 190.9 | -30.7 | 0.0 | Horz | AV | 0.0 | 6.5 | 54.0 | -47.6 | EUT Horz, 6 Mbps |
| 12185.850 | 30.7 | -0.6 | 1.2 | 198.0 | -30.7 | 0.0 | Vert | AV | 0.0 | -0.5 | 54.0 | -54.6 | EUT Horz, 6 Mbps |
| 12186.190 | 30.6 | -0.6 | 1.2 | 165.9 | -30.7 | 0.0 | Horz | AV | 0.0 | -0.6 | 54.0 | -54.7 | EUT Horz, 6 Mbps |

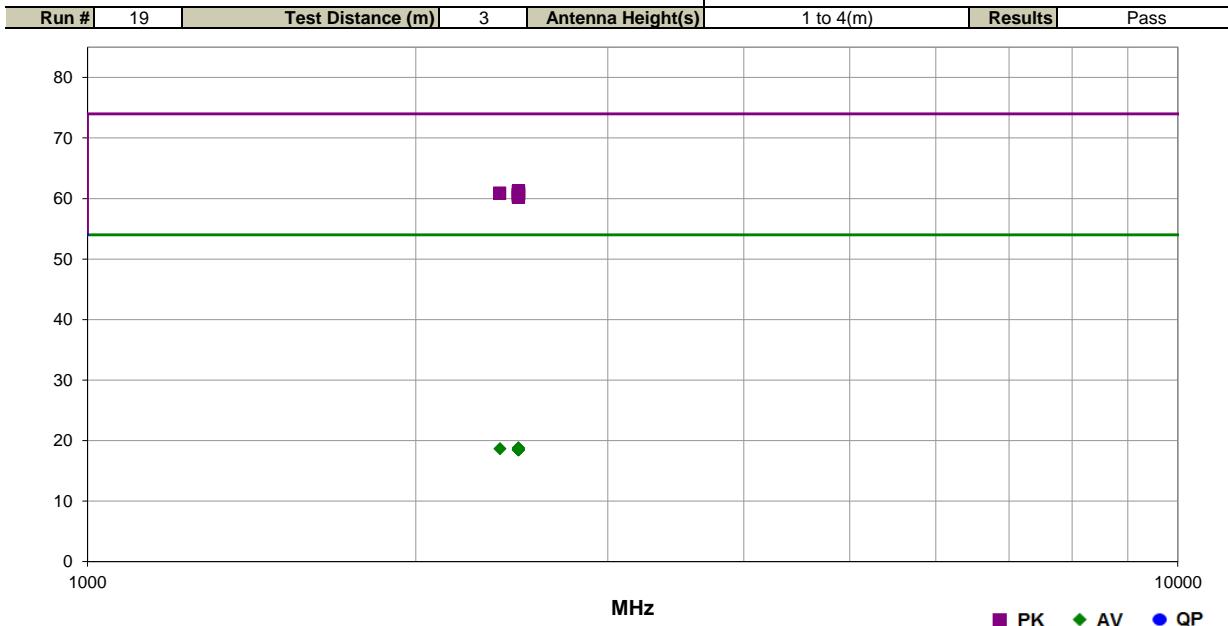
SPURIOUS RADIATED EMISSIONS



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| | | | | |
|-----------------|---|-------------------|------------|---|
| Work Order: | WTVD0014 | Date: | 8-Nov-2018 |  Jonathan Kiefer |
| Project: | None | Temperature: | 23.1 °C | |
| Job Site: | TX02 | Humidity: | 45.6% RH | |
| Serial Number: | VXL1-001324 XBC1-001149 | Barometric Pres.: | 1021 mbar | Tested by: Jonathan Kiefer |
| EUT: | VISTA XLT | | | |
| Configuration: | 1 | | | |
| Customer: | WatchGuard Video | | | |
| Attendees: | Navaid Karimi | | | |
| EUT Power: | Battery | | | |
| Operating Mode: | Continuously Transmitting at Single Channel 6, 2437 MHz | | | |
| Deviations: | None | | | |
| Comments: | Band Edge measurements. See comments below for EUT orientation and data rate information. EUT uses integral chip antenna with 2.2 dBi gain. EUT Duty Cycle < 98%, therefore upwardly corrected to 100% using $10 \times \log(1/DC)$. Worst-case upward correction factor: $10 \times \log(1/0.336) = 4.74$ dB. Then downwardly corrected based on duty cycle in final use (1.7%), using $20 \times \log(DC)$. Applied overall worst-case DCCF of -30.7 dB to average detector measurements. | | | |

| Test Specifications | Test Method |
|---------------------|------------------|
| FCC 15.247:2018 | ANSI C63.10:2013 |



| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Duty Cycle Correction Factor (dB) | External Attenuation (dB) | Polarity/Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments |
|------------|------------------|-------------|-------------------------|-------------------|-----------------------------------|---------------------------|--------------------------|----------|--------------------------|-------------------|----------------------|------------------------|--------------------------|
| 2484.850 | 44.7 | -3.4 | 1.2 | 300.0 | 0.0 | 20.0 | Horz | PK | 0.0 | 61.3 | 74.0 | -12.7 | EUT Horz, 54 Mbps |
| 2484.790 | 44.6 | -3.4 | 1.2 | 63.0 | 0.0 | 20.0 | Vert | PK | 0.0 | 61.2 | 74.0 | -12.8 | EUT Horz, 6 Mbps |
| 2484.180 | 44.6 | -3.4 | 4.0 | 266.0 | 0.0 | 20.0 | Horz | PK | 0.0 | 61.2 | 74.0 | -12.8 | EUT Horz, MCS0 7.2 Mbps |
| 2484.770 | 44.5 | -3.4 | 1.2 | 159.9 | 0.0 | 20.0 | Horz | PK | 0.0 | 61.1 | 74.0 | -12.9 | EUT Horz, 36 Mbps |
| 2388.103 | 44.7 | -3.8 | 1.2 | 142.9 | 0.0 | 20.0 | Horz | PK | 0.0 | 60.9 | 74.0 | -13.1 | EUT Horz, 6 Mbps |
| 2485.403 | 44.2 | -3.4 | 3.1 | 156.0 | 0.0 | 20.0 | Vert | PK | 0.0 | 60.8 | 74.0 | -13.2 | EUT Vert, 6 Mbps |
| 2484.243 | 44.1 | -3.4 | 1.2 | 85.0 | 0.0 | 20.0 | Horz | PK | 0.0 | 60.7 | 74.0 | -13.3 | EUT Vert, 6 Mbps |
| 2484.177 | 44.1 | -3.4 | 1.2 | 153.9 | 0.0 | 20.0 | Horz | PK | 0.0 | 60.7 | 74.0 | -13.3 | EUT Horz, MCS4 43.3 Mbps |
| 2484.527 | 44.0 | -3.4 | 1.2 | 43.0 | 0.0 | 20.0 | Horz | PK | 0.0 | 60.6 | 74.0 | -13.4 | EUT Horz, MCS7 72.2 Mbps |
| 2484.230 | 43.9 | -3.4 | 1.2 | 292.9 | 0.0 | 20.0 | Horz | PK | 0.0 | 60.5 | 74.0 | -13.5 | EUT Horz, 6 Mbps |
| 2484.453 | 43.9 | -3.4 | 1.2 | 283.0 | 0.0 | 20.0 | Vert | PK | 0.0 | 60.5 | 74.0 | -13.5 | EUT On Side, 6 Mbps |
| 2484.317 | 43.6 | -3.4 | 1.2 | 55.0 | 0.0 | 20.0 | Horz | PK | 0.0 | 60.2 | 74.0 | -13.8 | EUT On Side, 6 Mbps |
| 2484.833 | 32.8 | -3.4 | 1.2 | 292.9 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.8 | 54.0 | -35.3 | EUT Horz, 6 Mbps |
| 2484.750 | 32.8 | -3.4 | 1.2 | 300.0 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.8 | 54.0 | -35.3 | EUT Horz, 54 Mbps |
| 2389.553 | 33.1 | -3.8 | 1.2 | 142.9 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.7 | 54.0 | -35.4 | EUT Horz, 6 Mbps |
| 2484.897 | 32.6 | -3.4 | 1.2 | 63.0 | -30.7 | 20.0 | Vert | AV | 0.0 | 18.6 | 54.0 | -35.5 | EUT Horz, 6 Mbps |
| 2485.203 | 32.6 | -3.4 | 1.2 | 85.0 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.6 | 54.0 | -35.5 | EUT Vert, 6 Mbps |
| 2485.440 | 32.6 | -3.4 | 1.2 | 159.9 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.6 | 54.0 | -35.5 | EUT Horz, 36 Mbps |
| 2483.987 | 32.6 | -3.4 | 1.2 | 43.0 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.6 | 54.0 | -35.5 | EUT Horz, MCS7 22.2 Mbps |
| 2485.033 | 32.5 | -3.4 | 3.1 | 156.0 | -30.7 | 20.0 | Vert | AV | 0.0 | 18.5 | 54.0 | -35.6 | EUT Vert, 6 Mbps |
| 2483.717 | 32.5 | -3.4 | 1.2 | 55.0 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.5 | 54.0 | -35.6 | EUT On Side, 6 Mbps |
| 2484.317 | 32.5 | -3.4 | 1.2 | 283.0 | -30.7 | 20.0 | Vert | AV | 0.0 | 18.5 | 54.0 | -35.6 | EUT On Side, 6 Mbps |
| 2485.337 | 32.5 | -3.4 | 4.0 | 266.0 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.5 | 54.0 | -35.6 | EUT Horz, MCS0 7.2 Mbps |
| 2484.397 | 32.5 | -3.4 | 1.2 | 153.9 | -30.7 | 20.0 | Horz | AV | 0.0 | 18.5 | 54.0 | -35.6 | EUT Horz, MCS4 43.3 Mbps |

DUTY CYCLE



XMIT 2017.12.13

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

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Cal. Due |
|------------------------------|--------------------|-----------------------|-----|-----------|-----------|
| Attenuator | Fairview Microwave | SA4018-20 | TYW | 29-Mar-18 | 29-Mar-19 |
| Block - DC | Fairview Microwave | SD3379 | AMM | 29-Mar-18 | 29-Mar-19 |
| Cable | Micro-Coax | UFD150A-1-0720-200200 | TXG | 10-Oct-18 | 10-Oct-19 |
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFM | 19-Mar-18 | 19-Mar-19 |

TEST DESCRIPTION

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the

DUTY CYCLE



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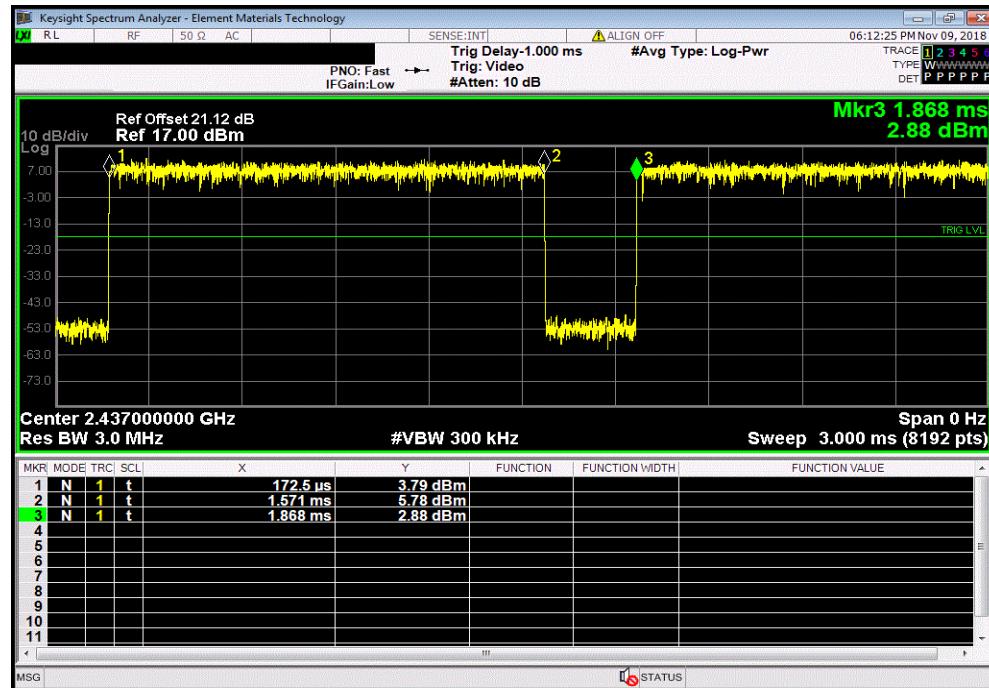
| EUT: | VISTA XLT | Work Order: | WTVD0014 | | | | |
|-------------------------------|--|-------------------|------------------|------------------|-----------|-----------|---------|
| Serial Number: | VXL1-000683 XBC1-001149 | Date: | 9-Nov-18 | | | | |
| Customer: | WatchGuard Video | Temperature: | 22.7 °C | | | | |
| Attendees: | Navaid Karimi | Humidity: | 34.5% RH | | | | |
| Project: | None | Barometric Pres.: | 1024 mbar | | | | |
| Tested by: | Jonathan Kiefer | Power: | Battery | | | | |
| TEST SPECIFICATIONS | | Test Method | ANSI C63.10:2013 | | | | |
| FCC 15.247:2018 | | | | | | | |
| COMMENTS | Ref Offset of 21.12 dB (20 dB Attenuator + DC Block + Cable). Integral antenna with antenna gain of 2.2 dBi. | | | | | | |
| DEVIATIONS FROM TEST STANDARD | | | | | | | |
| None | | | | | | | |
| Configuration # | 2 | Signature | | | | | |
| | | Jonathan Kiefer | | | | | |
| | | Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results |
| 2400 MHz - 2483.5 MHz Band | | | | | | | |
| 802.11(g) 6 Mbps | | | | | | | |
| | Single Channel 6, 2437 MHz | 1.399 ms | 1.695 ms | 1 | 82.5 | N/A | N/A |
| | Single Channel 6, 2437 MHz | N/A | N/A | 5 | N/A | N/A | N/A |
| 802.11(g) 36 Mbps | | | | | | | |
| | Single Channel 6, 2437 MHz | 250.8 us | 547.1 us | 1 | 45.8 | N/A | N/A |
| | Single Channel 6, 2437 MHz | N/A | N/A | 5 | N/A | N/A | N/A |
| 802.11(g) 54 Mbps | | | | | | | |
| | Single Channel 6, 2437 MHz | 174.5 us | 480 us | 1 | 36.4 | N/A | N/A |
| | Single Channel 6, 2437 MHz | N/A | N/A | 5 | N/A | N/A | N/A |
| 802.11(n) MCS0 | | | | | | | |
| | Single Channel 6, 2437 MHz | 1.18 ms | 1.485 ms | 1 | 79.4 | N/A | N/A |
| | Single Channel 6, 2437 MHz | N/A | N/A | 5 | N/A | N/A | N/A |
| 802.11(n) MCS4 | | | | | | | |
| | Single Channel 6, 2437 MHz | 225.8 us | 522 us | 1 | 43.3 | N/A | N/A |
| | Single Channel 6, 2437 MHz | N/A | N/A | 5 | N/A | N/A | N/A |
| 802.11(n) MCS7 | | | | | | | |
| | Single Channel 6, 2437 MHz | 149.9 us | 446.4 us | 1 | 33.6 | N/A | N/A |
| | Single Channel 6, 2437 MHz | N/A | N/A | 5 | N/A | N/A | N/A |

DUTY CYCLE

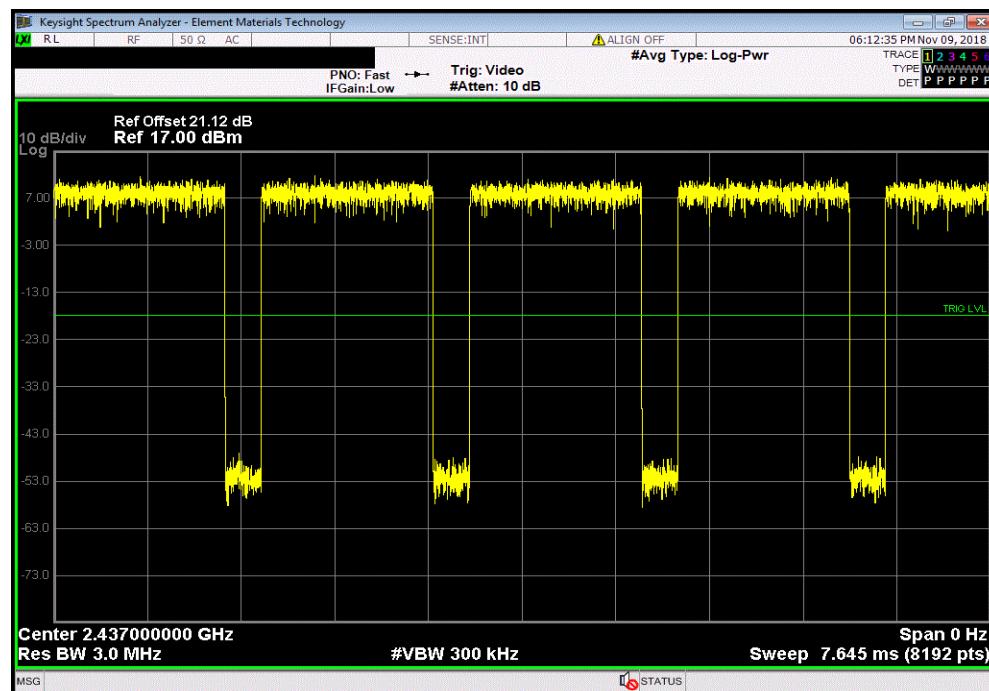


TbTx 2018.09.13 XMT 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | | | | |
|--|----------|------------------|-----------|-----------|---------|-----|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results | |
| 1.399 ms | 1.695 ms | 1 | 82.5 | N/A | N/A | N/A |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | | | | |
|--|--------|------------------|-----------|-----------|---------|-----|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results | |
| N/A | N/A | 5 | N/A | N/A | N/A | N/A |

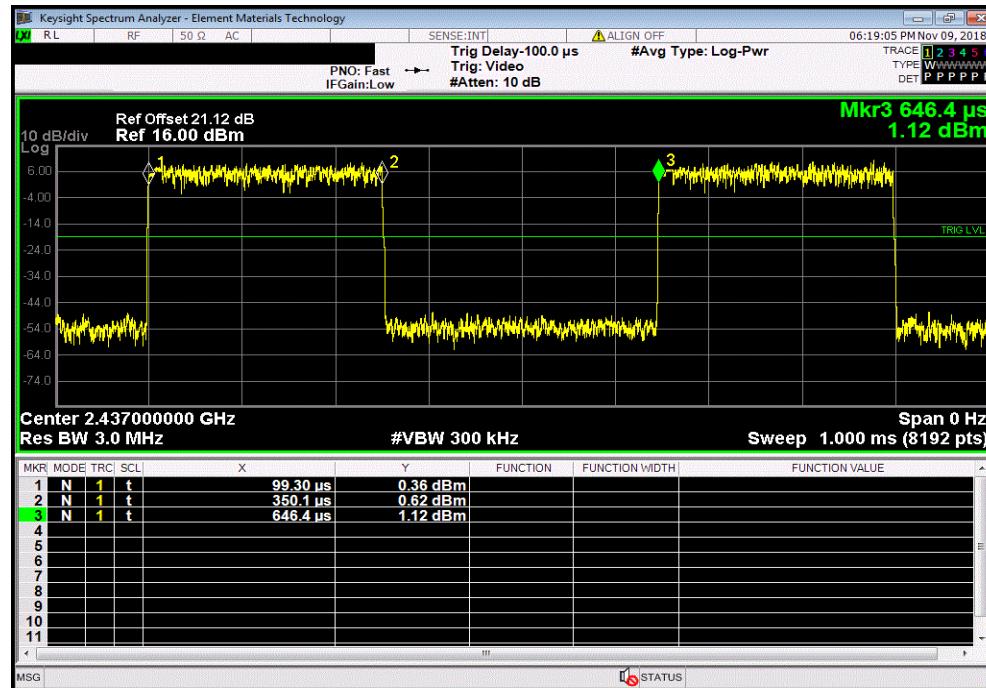


DUTY CYCLE

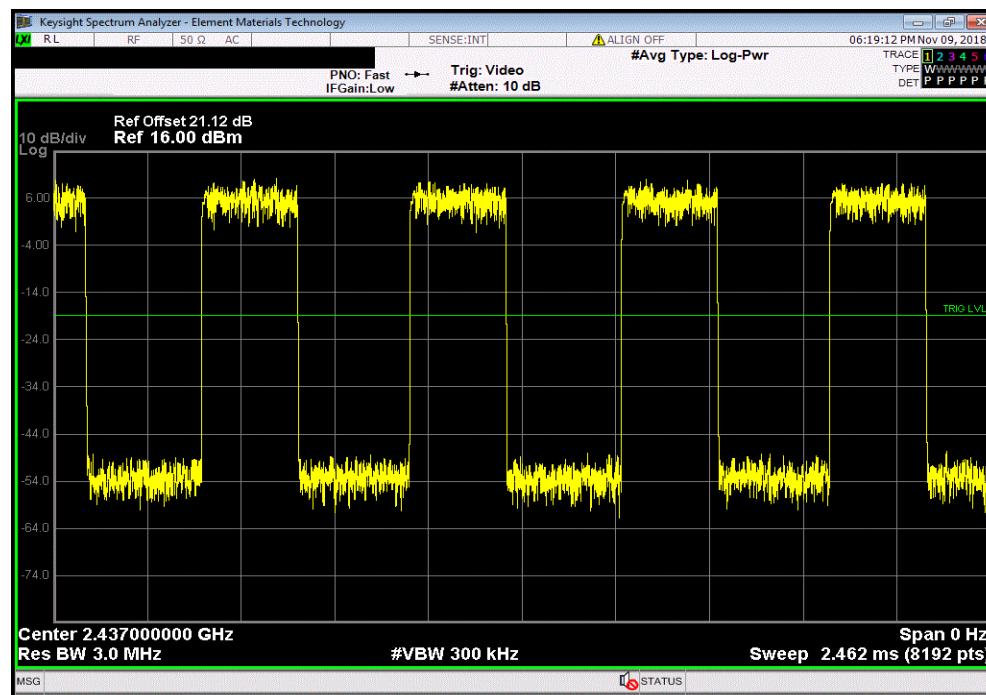


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|----------|------------------|-----------|-----------|---------|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results |
| 250.8 us | 547.1 us | 1 | 45.8 | N/A | N/A |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|--------|------------------|-----------|-----------|---------|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results |
| N/A | N/A | 5 | N/A | N/A | N/A |

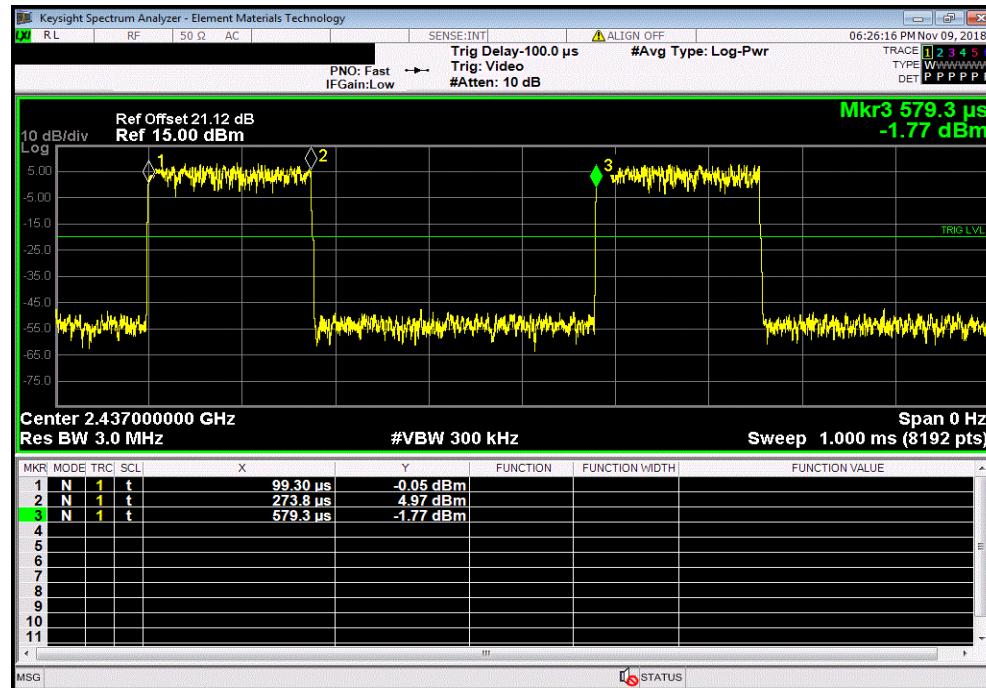


DUTY CYCLE

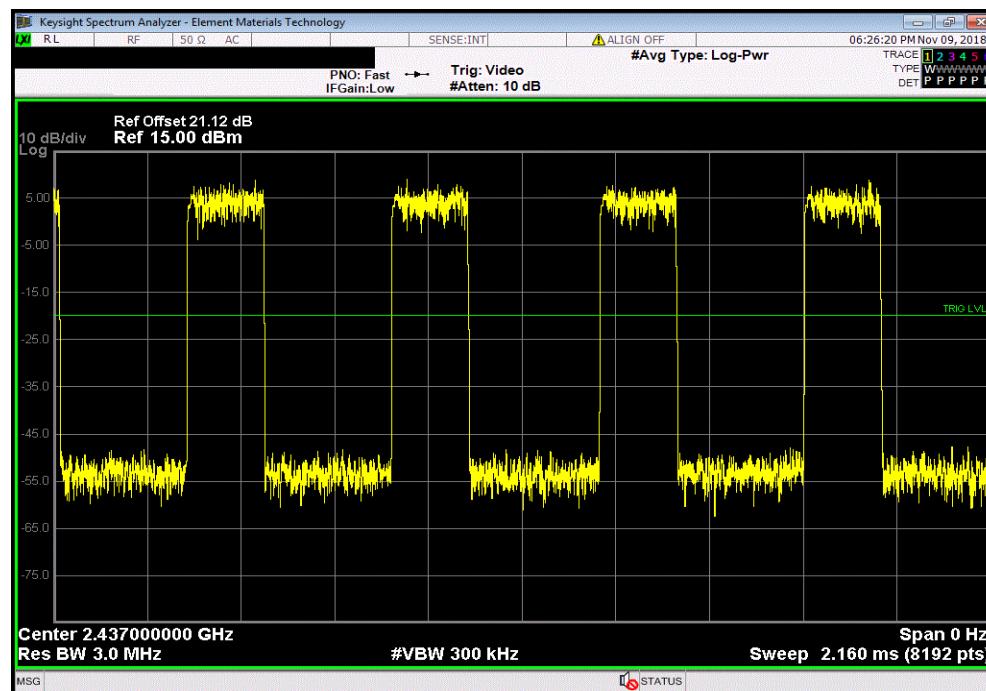


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|--------|------------------|-----------|-----------|---------|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results |
| 174.5 us | 480 us | 1 | 36.4 | N/A | N/A |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|--------|------------------|-----------|-----------|---------|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results |
| N/A | N/A | 5 | N/A | N/A | N/A |

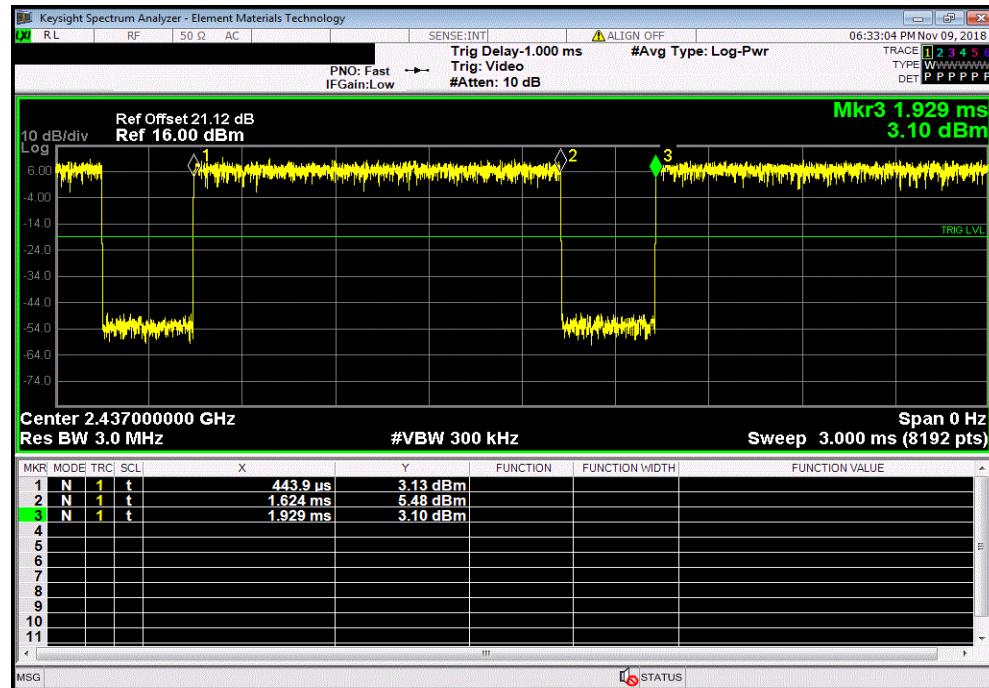


DUTY CYCLE

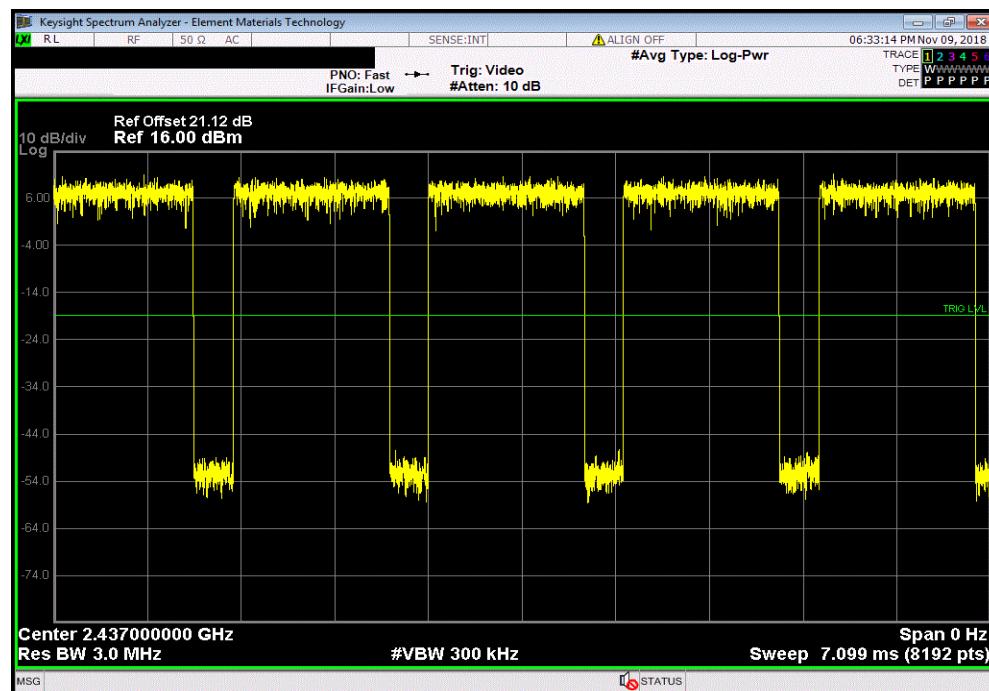


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | | | | |
|--|----------|------------------|-----------|-----------|---------|-----|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results | |
| 1.18 ms | 1.485 ms | 1 | 79.4 | N/A | N/A | N/A |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | | | | |
|--|--------|------------------|-----------|-----------|---------|-----|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results | |
| N/A | N/A | 5 | N/A | N/A | N/A | N/A |

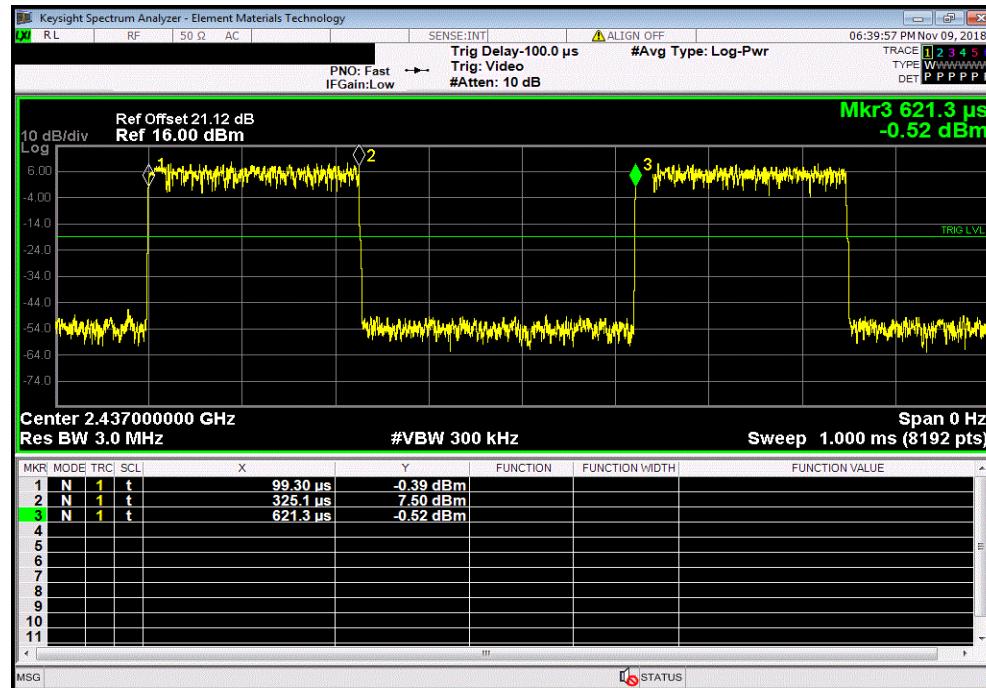


DUTY CYCLE

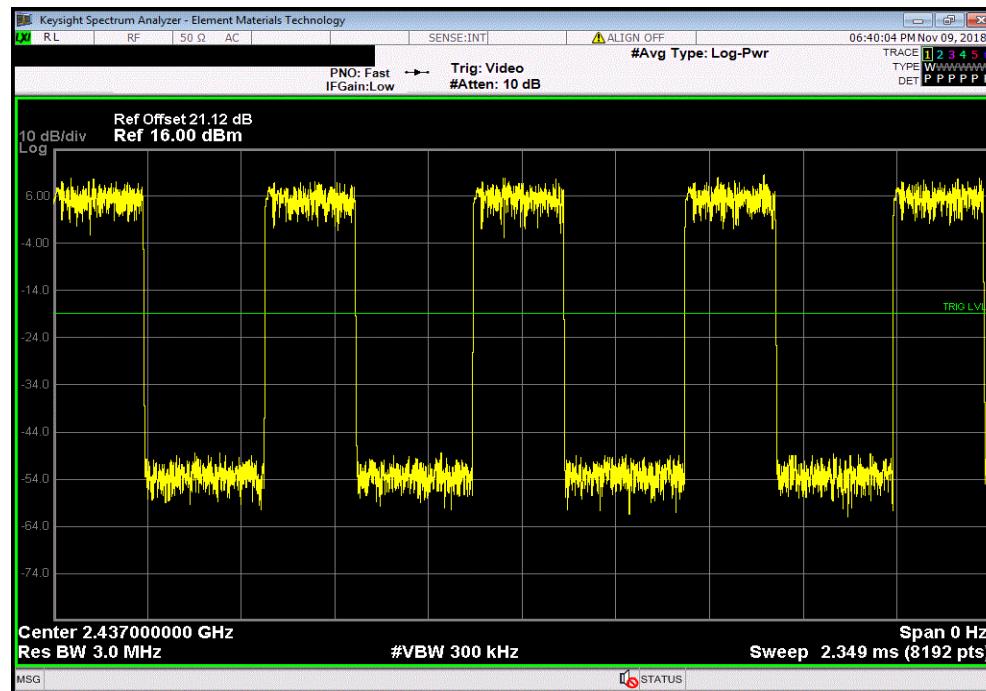


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | | | | |
|--|--------|------------------|-----------|-----------|---------|-----|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results | |
| 225.8 us | 522 us | 1 | 43.3 | N/A | N/A | N/A |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | | | | |
|--|--------|------------------|-----------|-----------|---------|-----|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results | |
| N/A | N/A | 5 | N/A | N/A | N/A | N/A |

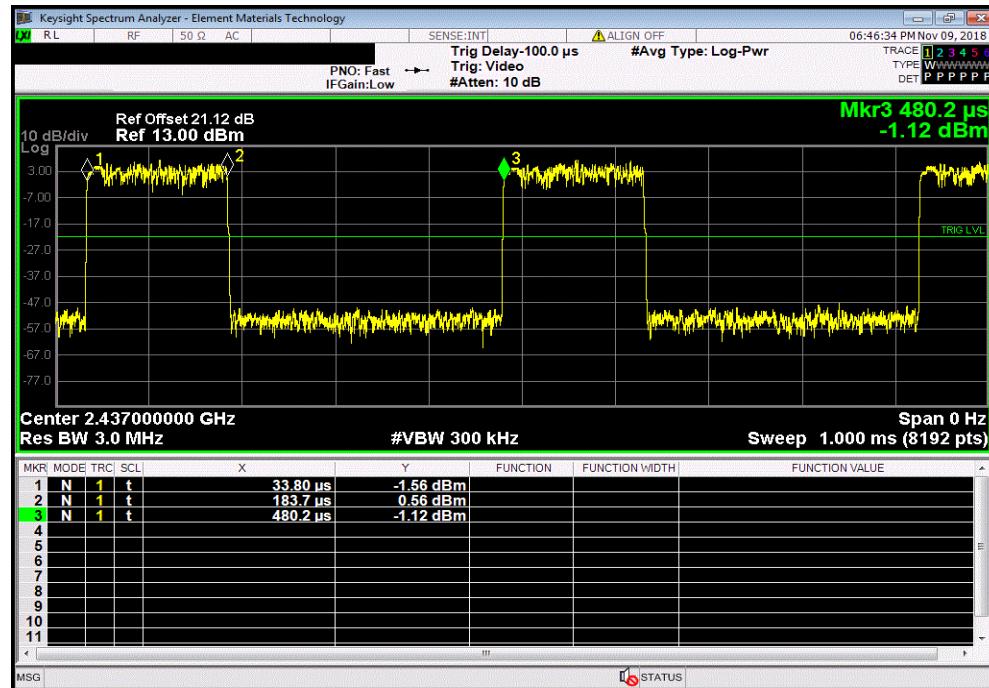


DUTY CYCLE



TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | | | |
|--|----------|------------------|-----------|-----------|---------|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results |
| 149.9 us | 446.4 us | 1 | 33.6 | N/A | N/A |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | | | |
|--|--------|------------------|-----------|-----------|---------|
| Pulse Width | Period | Number of Pulses | Value (%) | Limit (%) | Results |
| N/A | N/A | 5 | N/A | N/A | N/A |



OCCUPIED BANDWIDTH



XMIT 2017.12.13

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

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Cal. Due |
|------------------------------|--------------------|-----------------------|-----|-----------|-----------|
| Attenuator | Fairview Microwave | SA4018-20 | TYW | 29-Mar-18 | 29-Mar-19 |
| Block - DC | Fairview Microwave | SD3379 | AMM | 29-Mar-18 | 29-Mar-19 |
| Cable | Micro-Coax | UFD150A-1-0720-200200 | TXG | 10-Oct-18 | 10-Oct-19 |
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFM | 19-Mar-18 | 19-Mar-19 |

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was set to the channels and modes listed in the datasheet.

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.0% occupied bandwidth was also measured at the same time which can be needed during Output Power depending on the applicable method.

OCCUPIED BANDWIDTH



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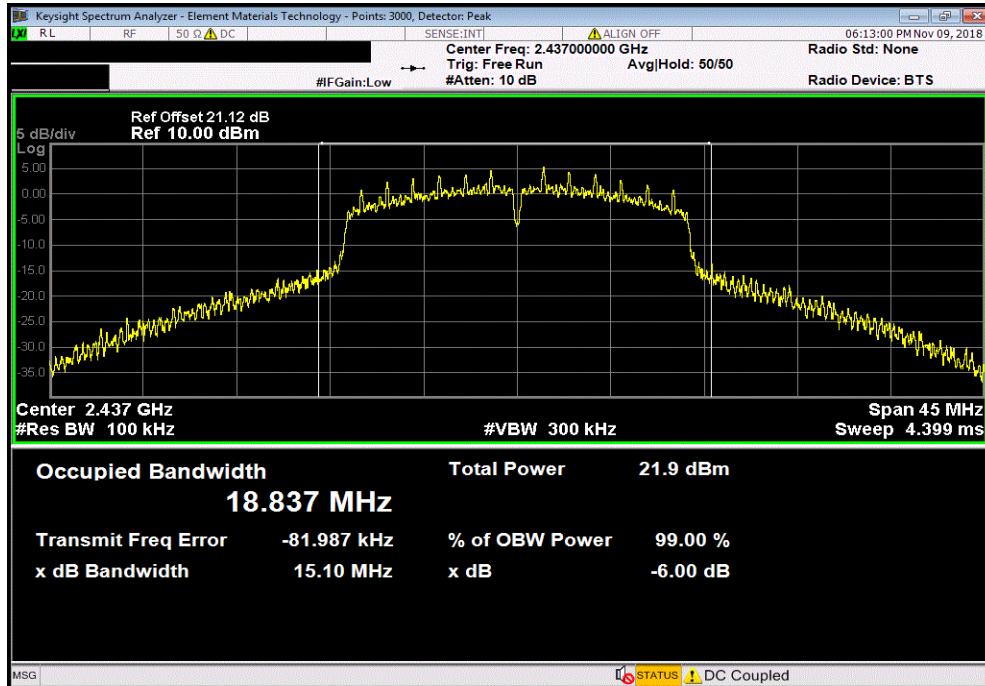
| EUT: | VISTA XLT | | Work Order: | WTVD0014 | |
|--|-------------------------|------------------|-------------------|-----------|--------|
| Serial Number: | VXL1-000683 XBC1-001149 | | Date: | 9-Nov-18 | |
| Customer: | WatchGuard Video | | Temperature: | 22.7 °C | |
| Attendees: | Navaid Karimi | | Humidity: | 34.5% RH | |
| Project: | None | | Barometric Pres.: | 1024 mbar | |
| Tested by: | Jonathan Kiefer | Power: | Battery | Job Site: | TX09 |
| TEST SPECIFICATIONS | | Test Method | | | |
| FCC 15.247:2018 | | ANSI C63.10:2013 | | | |
| COMMENTS | | | | | |
| Ref Offset of 21.12 dB (20 dB Attenuator + DC Block + Cable). Integral antenna with antenna gain of 2.2 dBi. | | | | | |
| DEVIATIONS FROM TEST STANDARD | | | | | |
| None | | | | | |
| Configuration # | 2 | Signature | Value | Limit (>) | Result |
| 2400 MHz - 2483.5 MHz Band | | | | | |
| 802.11(g) 6 Mbps | | | | | |
| Single Channel 6, 2437 MHz | | | | | |
| 15.102 MHz 500 kHz Pass | | | | | |
| 802.11(g) 36 Mbps | | | | | |
| Single Channel 6, 2437 MHz | | | | | |
| 15.107 MHz 500 kHz Pass | | | | | |
| 802.11(g) 54 Mbps | | | | | |
| Single Channel 6, 2437 MHz | | | | | |
| 15.111 MHz 500 kHz Pass | | | | | |
| 802.11(n) MCS0 | | | | | |
| Single Channel 6, 2437 MHz | | | | | |
| 15.107 MHz 500 kHz Pass | | | | | |
| 802.11(n) MCS4 | | | | | |
| Single Channel 6, 2437 MHz | | | | | |
| 15.107 MHz 500 kHz Pass | | | | | |
| 802.11(n) MCS7 | | | | | |
| Single Channel 6, 2437 MHz | | | | | |
| 15.111 MHz 500 kHz Pass | | | | | |

OCCUPIED BANDWIDTH

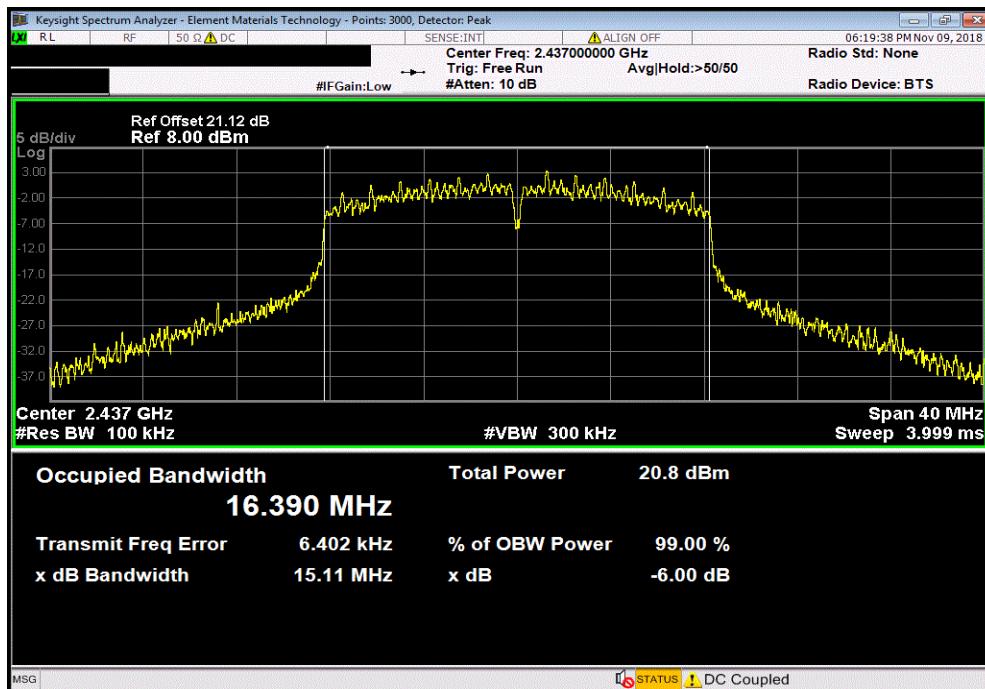


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | Limit |
|--|---------|--------|-------|
| Value | (>) | Result | |
| 15.102 MHz | 500 kHz | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | Limit |
|---|---------|--------|-------|
| Value | (>) | Result | |
| 15.107 MHz | 500 kHz | Pass | |

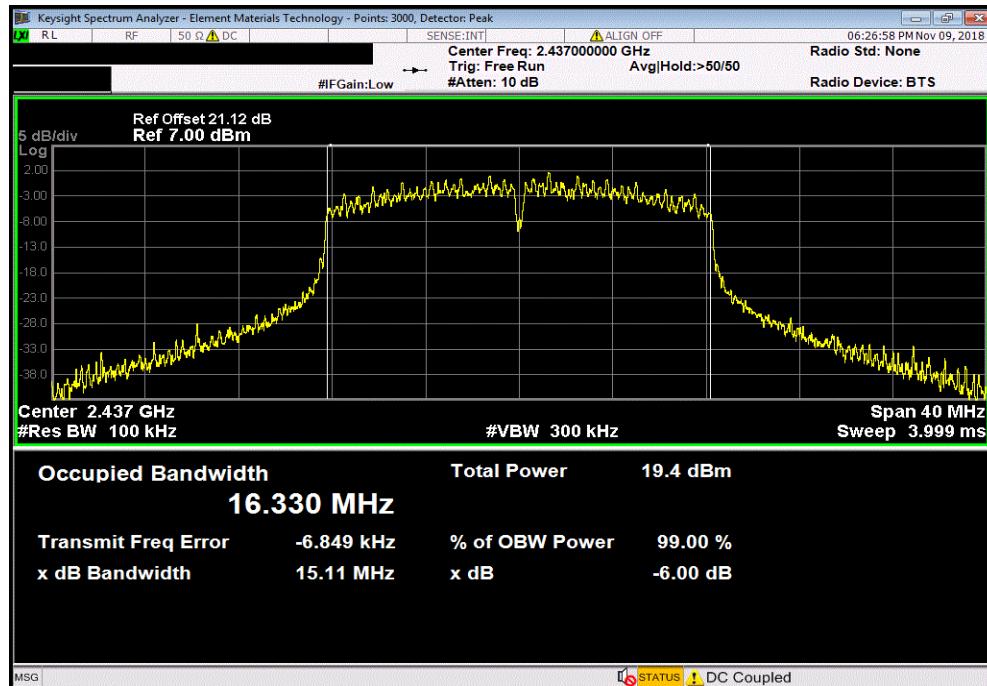


OCCUPIED BANDWIDTH

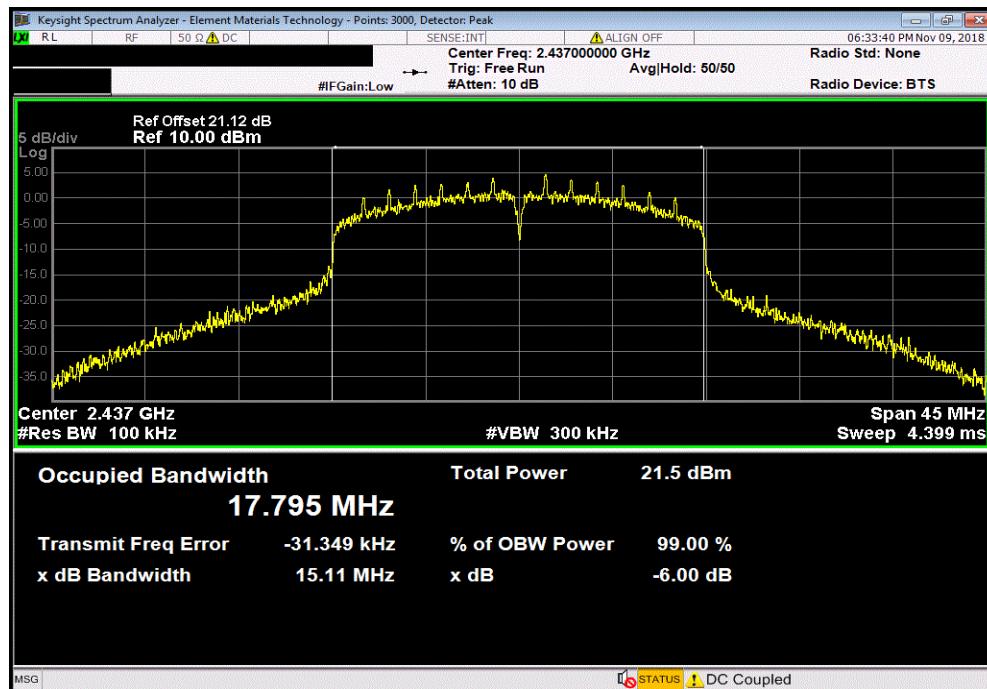


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | Limit |
|---|---------|--------|-------|
| Value | (>) | Result | |
| 15.111 MHz | 500 kHz | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | Limit |
|--|---------|--------|-------|
| Value | (>) | Result | |
| 15.107 MHz | 500 kHz | Pass | |

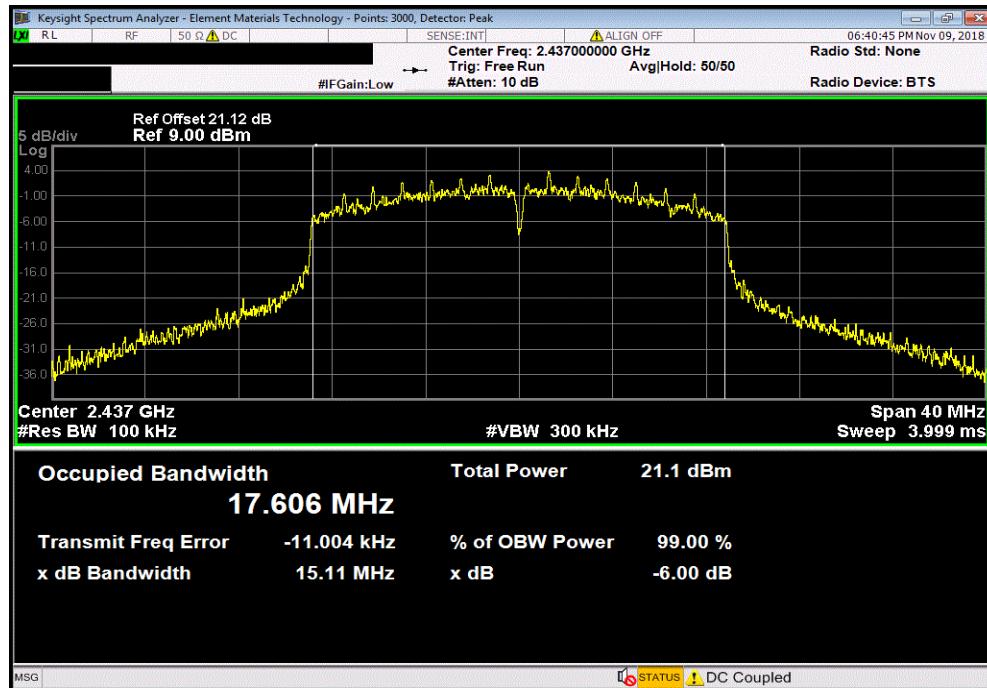


OCCUPIED BANDWIDTH

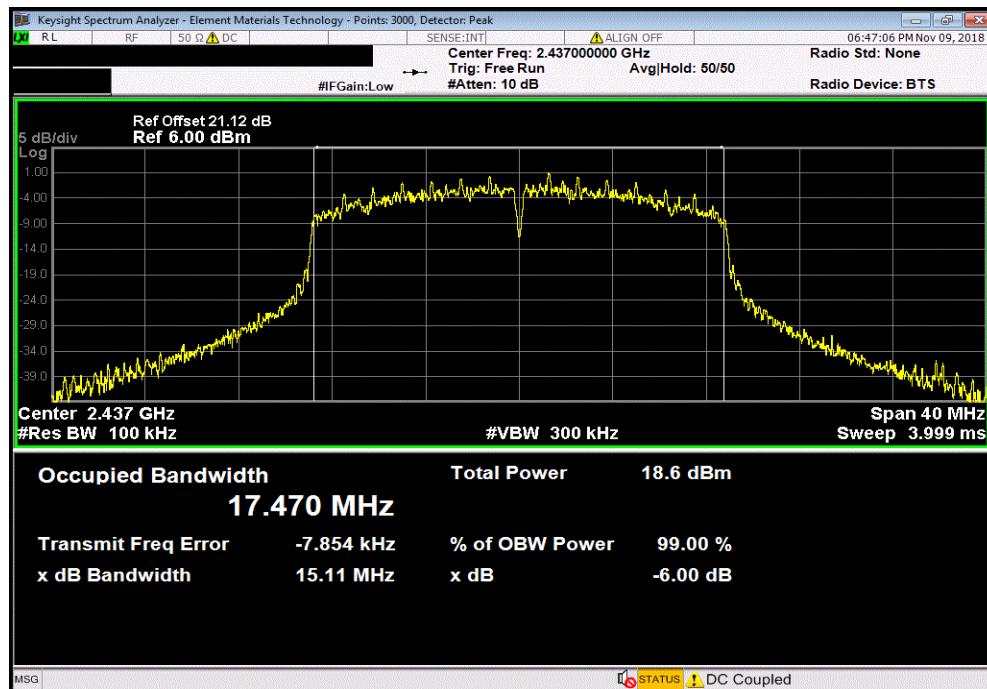


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | Limit |
|--|---------|--------|-------|
| Value | (>) | Result | |
| 15.107 MHz | 500 kHz | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | Limit |
|--|---------|--------|-------|
| Value | (>) | Result | |
| 15.111 MHz | 500 kHz | Pass | |



OUTPUT POWER



XMIT 2017.12.13

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

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|------------------------------|--------------------|-----------------------|-----|-----------|-----------|
| Attenuator | Fairview Microwave | SA4018-20 | TYW | 29-Mar-18 | 29-Mar-19 |
| Block - DC | Fairview Microwave | SD3379 | AMM | 29-Mar-18 | 29-Mar-19 |
| Cable | Micro-Coax | UFD150A-1-0720-200200 | TXG | 10-Oct-18 | 10-Oct-19 |
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFM | 19-Mar-18 | 19-Mar-19 |

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

Prior to measuring output power; the emission bandwidth (B) and the transmission pulse duration (T) were measured. Both are required to determine the method of measuring Maximum Conducted Output Power. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

The method AVGSA-2 in section 11.9.2.2.4 of ANSI C63.10:2013 was used to make the measurement. This method uses trace averaging across ON and OFF times of the EUT transmissions in the spectrum analyzer channel power function using an RMS detector. Following the measurement a duty cycle correction was applied by adding $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times.

OUTPUT POWER



TbitTx 2018.09.13

XMR 2017.12.13

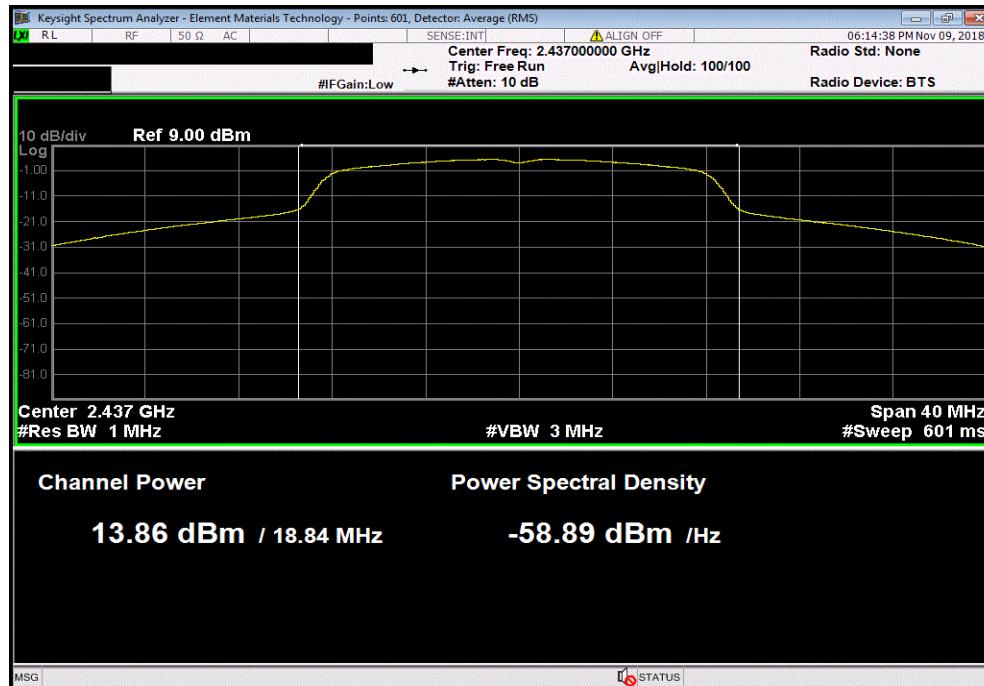
| EUT: | VISTA XLT | Work Order: | WTVD0014 | | | |
|--|----------------------------|------------------------|---------------------------|------------------|----------------|--------|
| Serial Number: | VXL1-000683 XBC1-001149 | Date: | 9-Nov-18 | | | |
| Customer: | WatchGuard Video | Temperature: | 22.7 °C | | | |
| Attendees: | Navaid Karimi | Humidity: | 34.5% RH | | | |
| Project: | None | Barometric Pres.: | 1024 mbar | | | |
| Tested by: | Jonathan Kiefer | Power: | Battery | | | |
| TEST SPECIFICATIONS | | Test Method | ANSI C63.10:2013 | | | |
| FCC 15.247:2018 | | | | | | |
| COMMENTS | | | | | | |
| Integral antenna with antenna gain of 2.2 dBi. | | | | | | |
| DEVIATIONS FROM TEST STANDARD | | | | | | |
| None | | | | | | |
| Configuration # | 2 | Signature | | | | |
| | | <i>Jonathan Kiefer</i> | | | | |
| | | Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Limit (dBm) | Result |
| 2400 MHz - 2483.5 MHz Band | | | | | | |
| 802.11(g) 6 Mbps | Single Channel 6, 2437 MHz | 13.856 | 0.8 | 14.7 | 30 | Pass |
| 802.11(g) 36 Mbps | Single Channel 6, 2437 MHz | 9.708 | 3.4 | 13.1 | 30 | Pass |
| 802.11(g) 54 Mbps | Single Channel 6, 2437 MHz | 7.354 | 4.4 | 11.7 | 30 | Pass |
| 802.11(n) MCS0 | Single Channel 6, 2437 MHz | 12.915 | 1 | 13.9 | 30 | Pass |
| 802.11(n) MCS4 | Single Channel 6, 2437 MHz | 9.677 | 3.6 | 13.3 | 30 | Pass |
| 802.11(n) MCS7 | Single Channel 6, 2437 MHz | 6.032 | 4.7 | 10.8 | 30 | Pass |

OUTPUT POWER

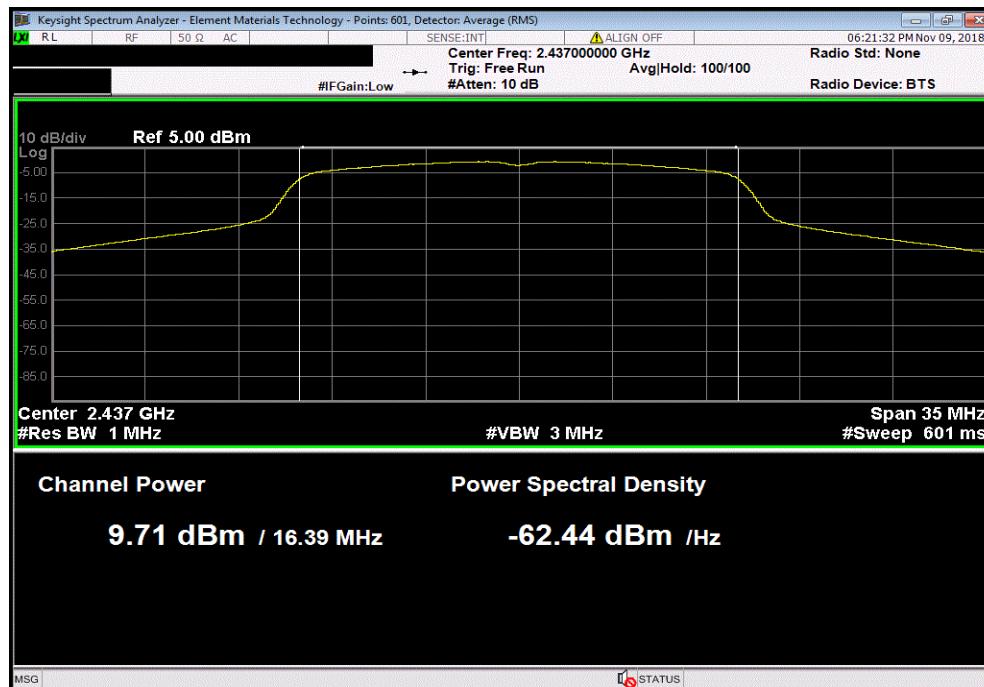


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | | | |
|--|------------------------|------------------|----------------|--------|--|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Limit (dBm) | Result | |
| 13.856 | 0.8 | 14.7 | 30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|------------------------|------------------|----------------|--------|--|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Limit (dBm) | Result | |
| 9.708 | 3.4 | 13.1 | 30 | Pass | |

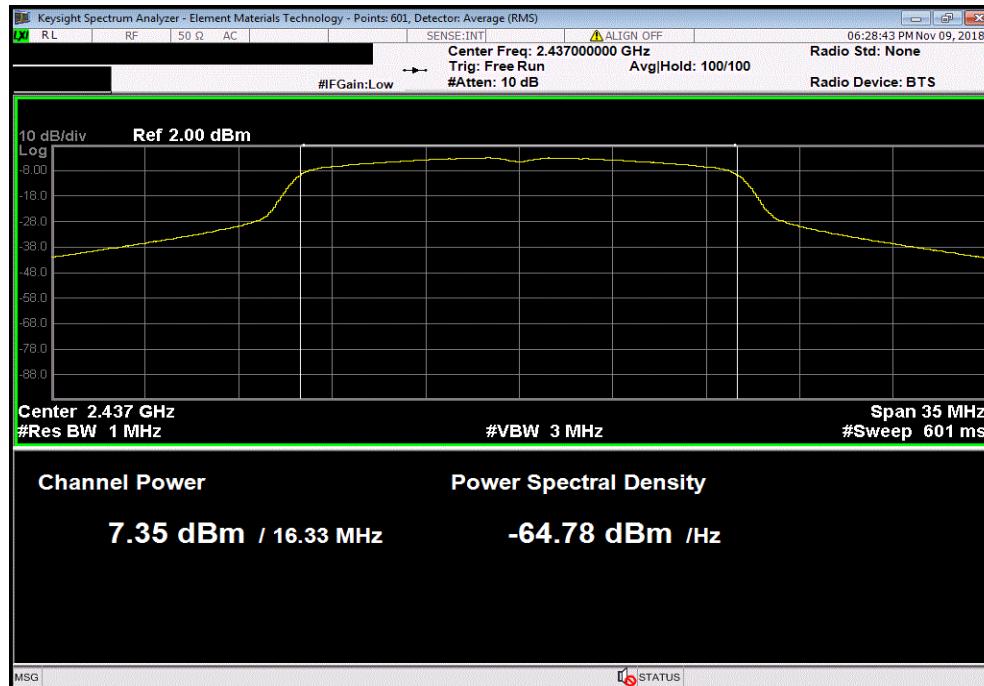


OUTPUT POWER

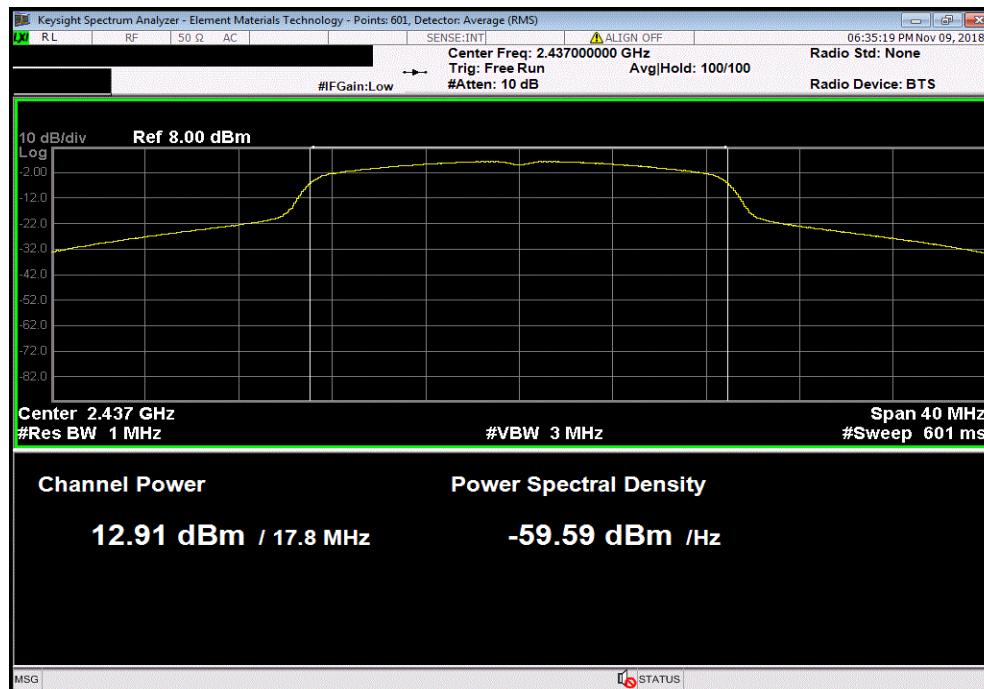


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|------------------------|------------------|----------------|--------|--|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Limit (dBm) | Result | |
| 7.354 | 4.4 | 11.7 | 30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | | | |
|--|------------------------|------------------|----------------|--------|--|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Limit (dBm) | Result | |
| 12.915 | 1 | 13.9 | 30 | Pass | |

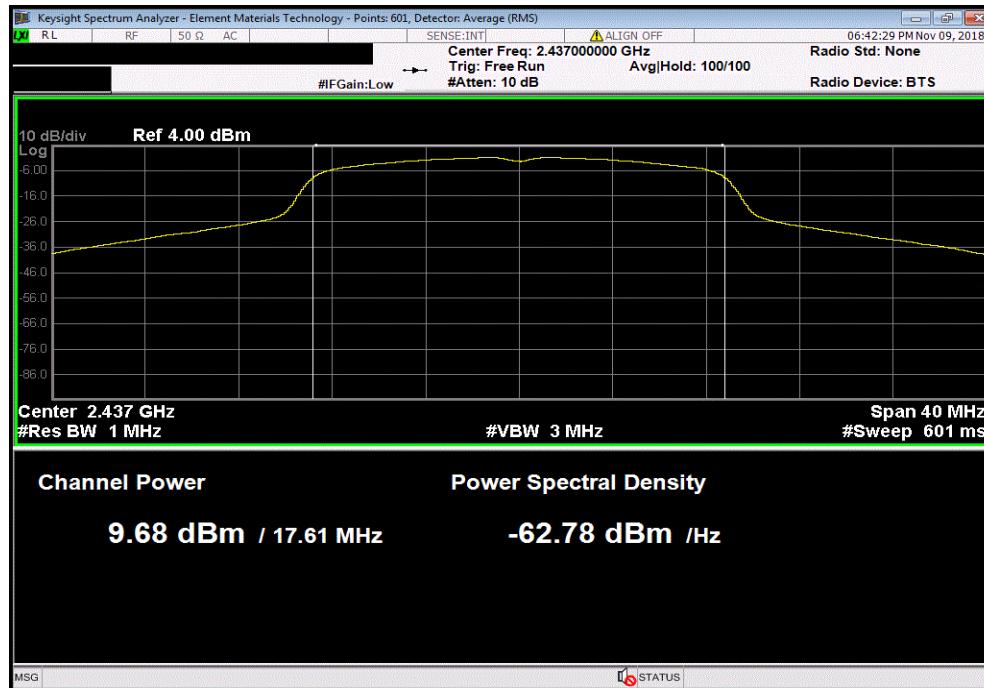


OUTPUT POWER

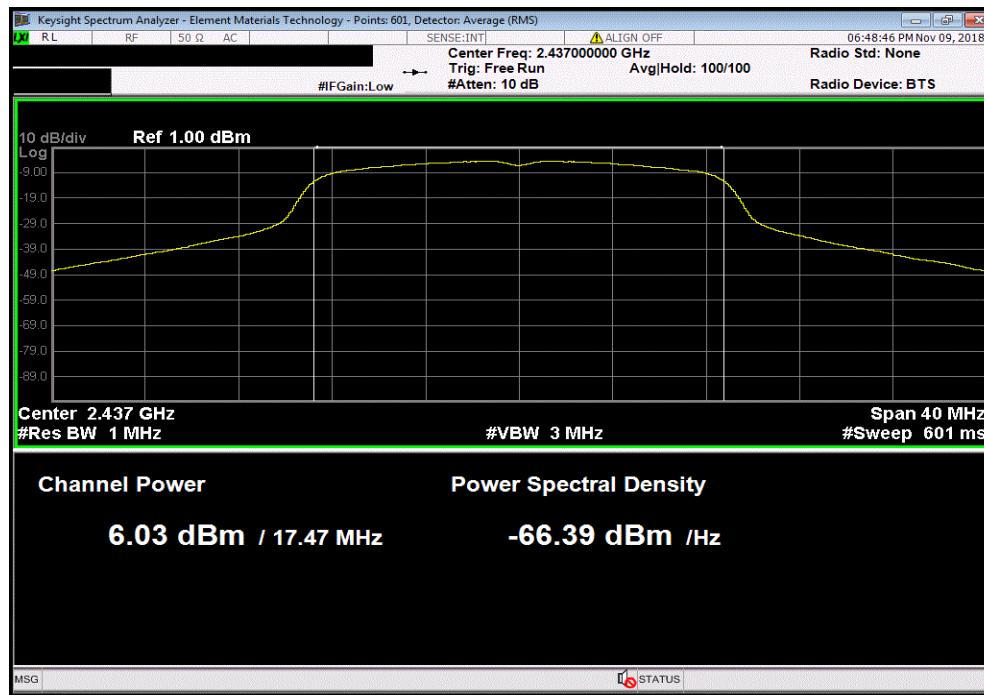


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | | | |
|--|------------------------|------------------|----------------|--------|--|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Limit (dBm) | Result | |
| 9.677 | 3.6 | 13.3 | 30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | | | |
|--|------------------------|------------------|----------------|--------|--|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Limit (dBm) | Result | |
| 6.032 | 4.7 | 10.8 | 30 | Pass | |



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



XMit 2017.12.13

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

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Cal. Due |
|------------------------------|--------------------|-----------------------|-----|-----------|-----------|
| Attenuator | Fairview Microwave | SA4018-20 | TYW | 29-Mar-18 | 29-Mar-19 |
| Block - DC | Fairview Microwave | SD3379 | AMM | 29-Mar-18 | 29-Mar-19 |
| Cable | Micro-Coax | UFD150A-1-0720-200200 | TXG | 10-Oct-18 | 10-Oct-19 |
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFM | 19-Mar-18 | 19-Mar-19 |

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

Prior to measuring output power; the emission bandwidth (B) and the transmission pulse duration (T) were measured. Both are required to determine the method of measuring Maximum Conducted Output Power. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

The method AVGSA-2 in section 11.9.2.2.4 of ANSI C63.10:2013 was used to make the measurement. This method uses trace averaging across ON and OFF times of the EUT transmissions in the spectrum analyzer channel power function using an RMS detector. Following the measurement a duty cycle correction was applied by adding $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times.

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TbitTx 2018.09.13

XMR 2017.12.13

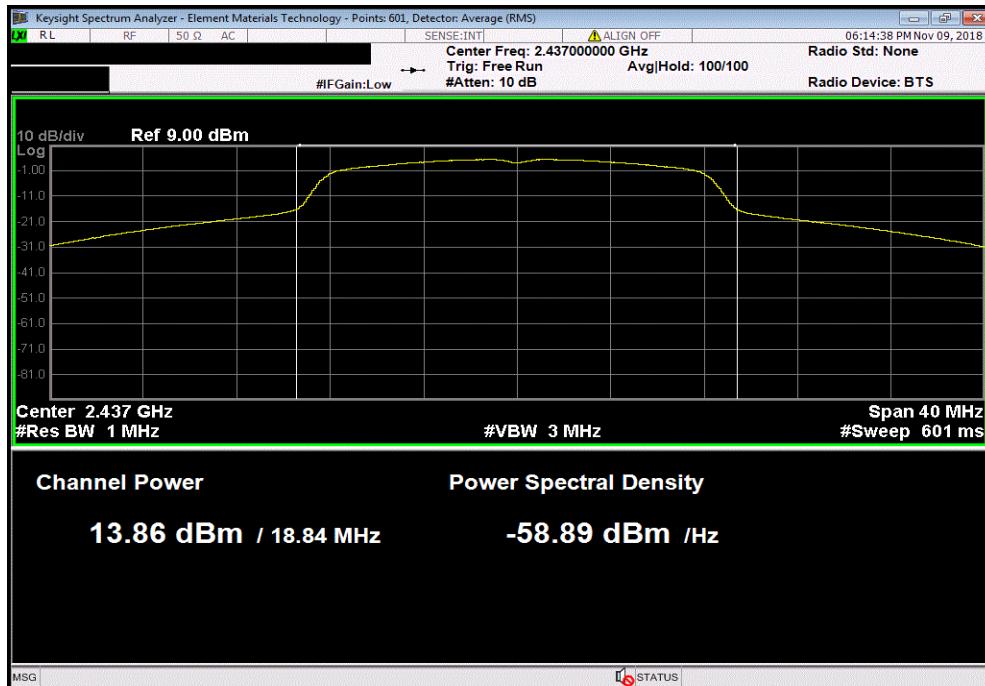
| EUT: | VISTA XLT | Work Order: | WTVD0014 | | | | | |
|--|-------------------------|-----------------------|---------------------------|------------------|-----------------------|---------------|---------------------|--------|
| Serial Number: | VXL1-000683 XBC1-001149 | Date: | 9-Nov-18 | | | | | |
| Customer: | WatchGuard Video | Temperature: | 22.7 °C | | | | | |
| Attendees: | Navaid Karimi | Humidity: | 34.5% RH | | | | | |
| Project: | None | Barometric Pres.: | 1024 mbar | | | | | |
| Tested by: | Jonathan Kiefer | Power: | Battery | | | | | |
| TEST SPECIFICATIONS | | Test Method | ANSI C63.10:2013 | | | | | |
| FCC 15.247:2018 | | | | | | | | |
| COMMENTS | | | | | | | | |
| Integral antenna with antenna gain of 2.2 dBi. | | | | | | | | |
| DEVIATIONS FROM TEST STANDARD | | | | | | | | |
| None | | | | | | | | |
| Configuration # | 2 | Signature | | | | | | |
| | | Jonathan Kiefer | | | | | | |
| | | Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Antenna Gain (dBi) | EIRP (dBm) | EIRP Limit (dBm) | Result |
| 2400 MHz - 2483.5 MHz Band | | | | | | | | |
| 802.11(g) 6 Mbps | | | | | | | | |
| Single Channel 6, 2437 MHz | | | | | | | | |
| 13.856 0.8 14.7 2.2 16.9 36 Pass | | | | | | | | |
| 802.11(g) 36 Mbps | | | | | | | | |
| Single Channel 6, 2437 MHz | | | | | | | | |
| 9.708 3.4 13.1 2.2 15.3 36 Pass | | | | | | | | |
| 802.11(g) 54 Mbps | | | | | | | | |
| Single Channel 6, 2437 MHz | | | | | | | | |
| 7.354 4.4 11.7 2.2 13.9 36 Pass | | | | | | | | |
| 802.11(n) MCS0 | | | | | | | | |
| Single Channel 6, 2437 MHz | | | | | | | | |
| 12.915 1 13.9 2.2 16.1 36 Pass | | | | | | | | |
| 802.11(n) MCS4 | | | | | | | | |
| Single Channel 6, 2437 MHz | | | | | | | | |
| 9.677 3.6 13.3 2.2 15.5 36 Pass | | | | | | | | |
| 802.11(n) MCS7 | | | | | | | | |
| Single Channel 6, 2437 MHz | | | | | | | | |
| 6.032 4.7 10.8 2.2 13 36 Pass | | | | | | | | |

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

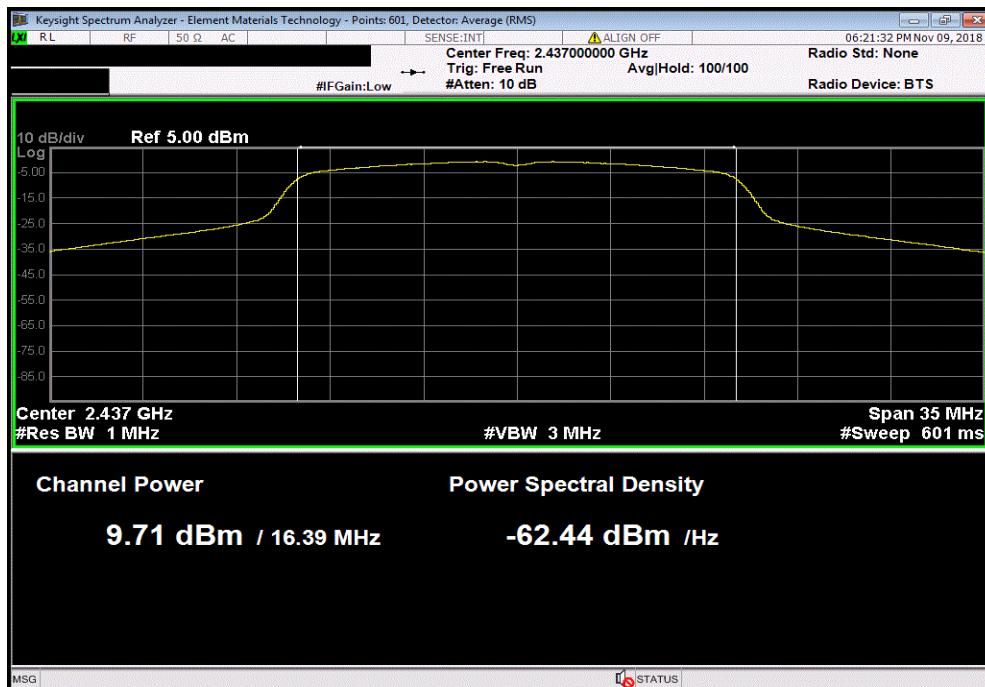


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | | | | |
|--|---------------------------|------------------|-----------------------|---------------|---------------------|--------|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Antenna Gain (dBi) | EIRP (dBm) | EIRP Limit (dBm) | Result |
| 13.856 | 0.8 | 14.7 | 2.2 | 16.9 | 36 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | | | | |
|---|---------------------------|------------------|-----------------------|---------------|---------------------|--------|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Antenna Gain (dBi) | EIRP (dBm) | EIRP Limit (dBm) | Result |
| 9.708 | 3.4 | 13.1 | 2.2 | 15.3 | 36 | Pass |

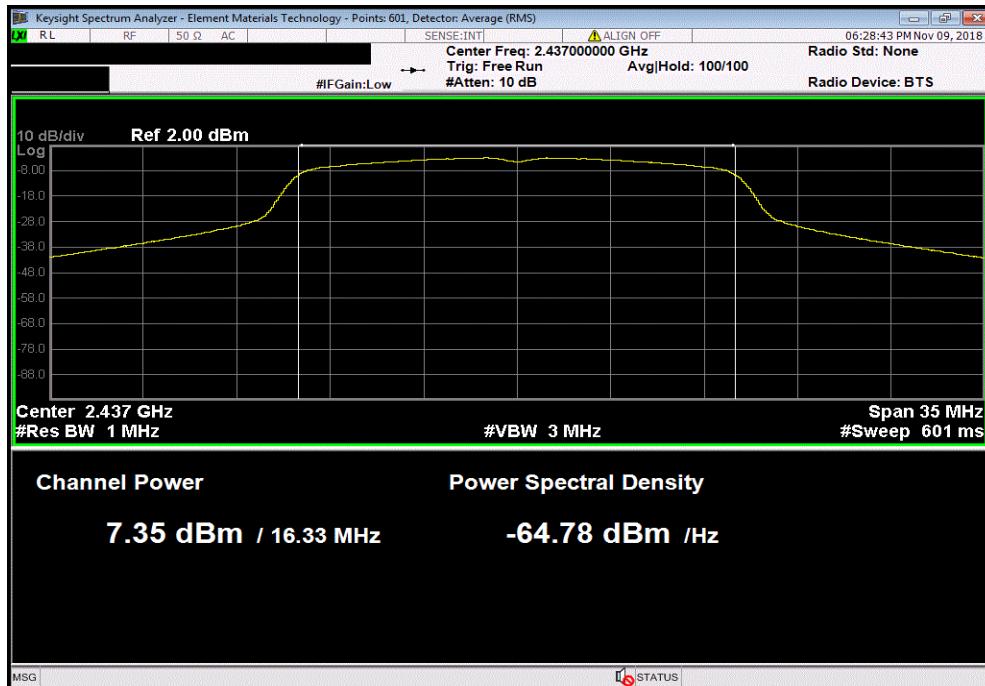


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

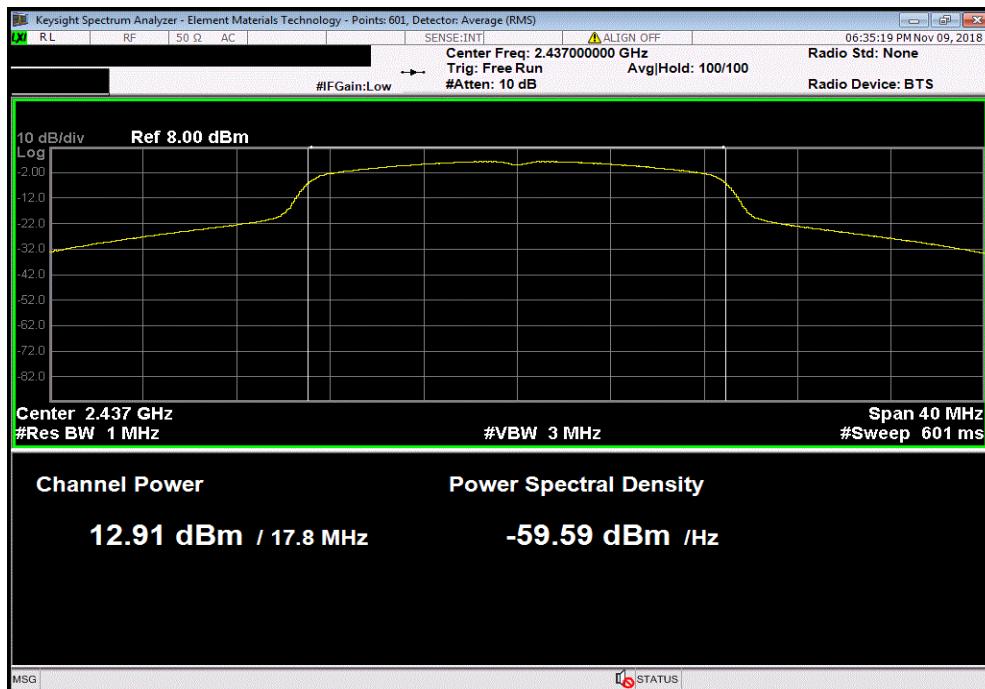


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | | | | |
|---|---------------------------|------------------|-----------------------|---------------|---------------------|--------|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Antenna Gain (dBi) | EIRP (dBm) | EIRP Limit (dBm) | Result |
| 7.354 | 4.4 | 11.7 | 2.2 | 13.9 | 36 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | | | | |
|--|---------------------------|------------------|-----------------------|---------------|---------------------|--------|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Antenna Gain (dBi) | EIRP (dBm) | EIRP Limit (dBm) | Result |
| 12.915 | 1 | 13.9 | 2.2 | 16.1 | 36 | Pass |

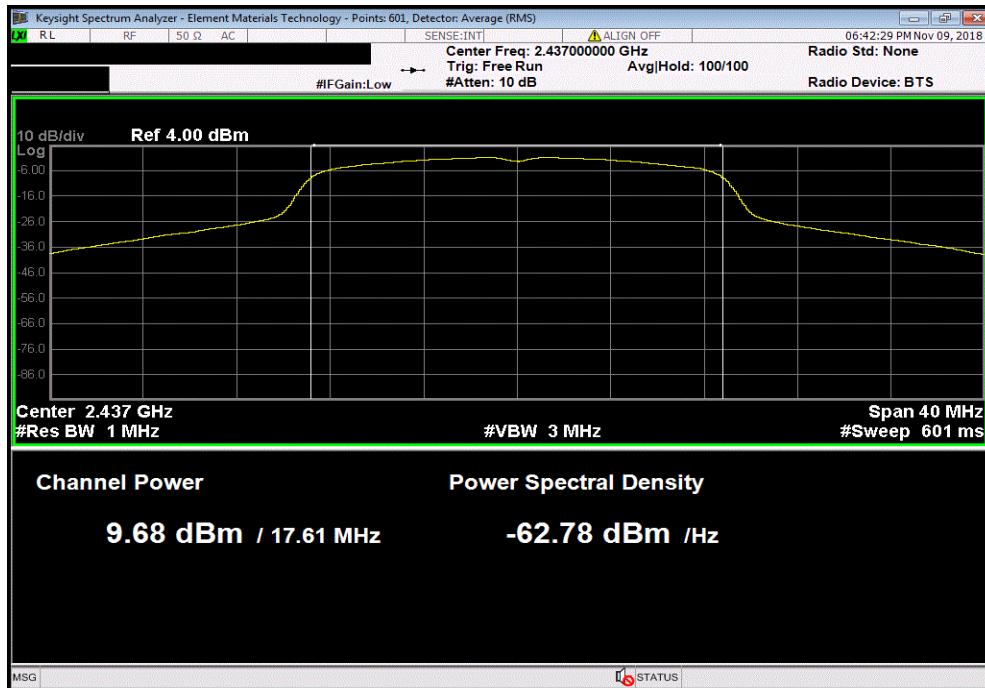


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

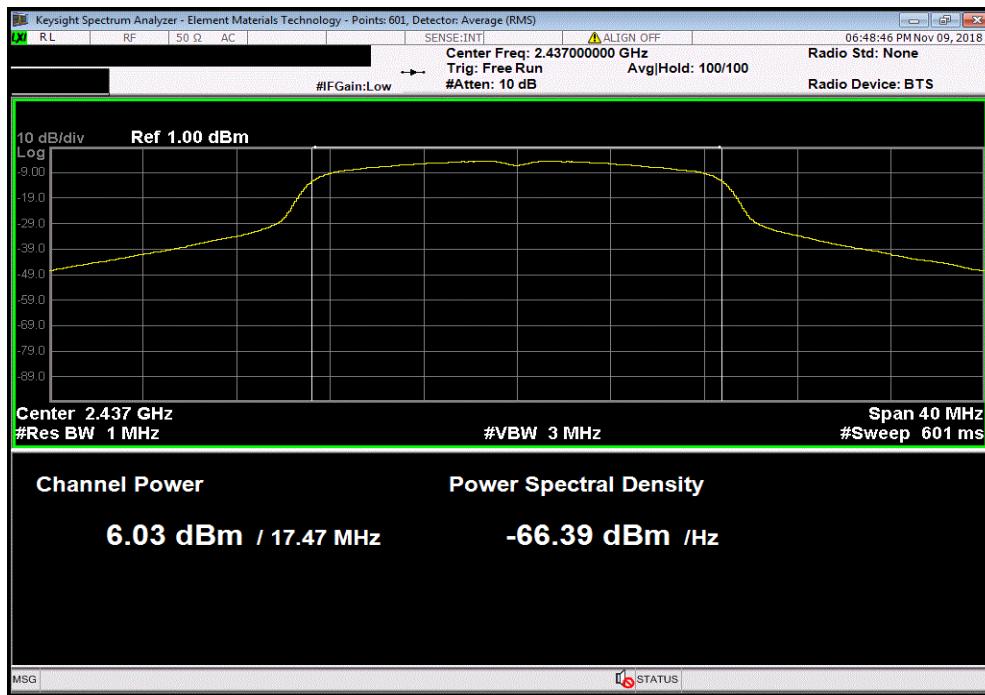


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | | | | |
|--|---------------------------|------------------|-----------------------|---------------|---------------------|--------|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Antenna Gain (dBi) | EIRP (dBm) | EIRP Limit (dBm) | Result |
| 9.677 | 3.6 | 13.3 | 2.2 | 15.5 | 36 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | | | | |
|--|---------------------------|------------------|-----------------------|---------------|---------------------|--------|
| Avg Cond Pwr (dBm) | Duty Cycle Factor (dB) | Out Pwr (dBm) | Antenna Gain (dBi) | EIRP (dBm) | EIRP Limit (dBm) | Result |
| 6.032 | 4.7 | 10.8 | 2.2 | 13 | 36 | Pass |



POWER SPECTRAL DENSITY



XMit 2017.12.13

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

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Cal. Due |
|------------------------------|--------------------|-----------------------|-----|-----------|-----------|
| Attenuator | Fairview Microwave | SA4018-20 | TYW | 29-Mar-18 | 29-Mar-19 |
| Block - DC | Fairview Microwave | SD3379 | AMM | 29-Mar-18 | 29-Mar-19 |
| Cable | Micro-Coax | UFD150A-1-0720-200200 | TXG | 10-Oct-18 | 10-Oct-19 |
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFM | 19-Mar-18 | 19-Mar-19 |

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The power spectral density was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

The method AVGPSD-1 in section 11.10.3 of ANSI C63.10:2013 was used to make the measurement. This method uses trace averaging and RMS detection across the full power of the burst. This method is allowed as the same method has been used to determine the conducted output power.

POWER SPECTRAL DENSITY



TbitTx 2018.09.13

XMR 2017.12.13

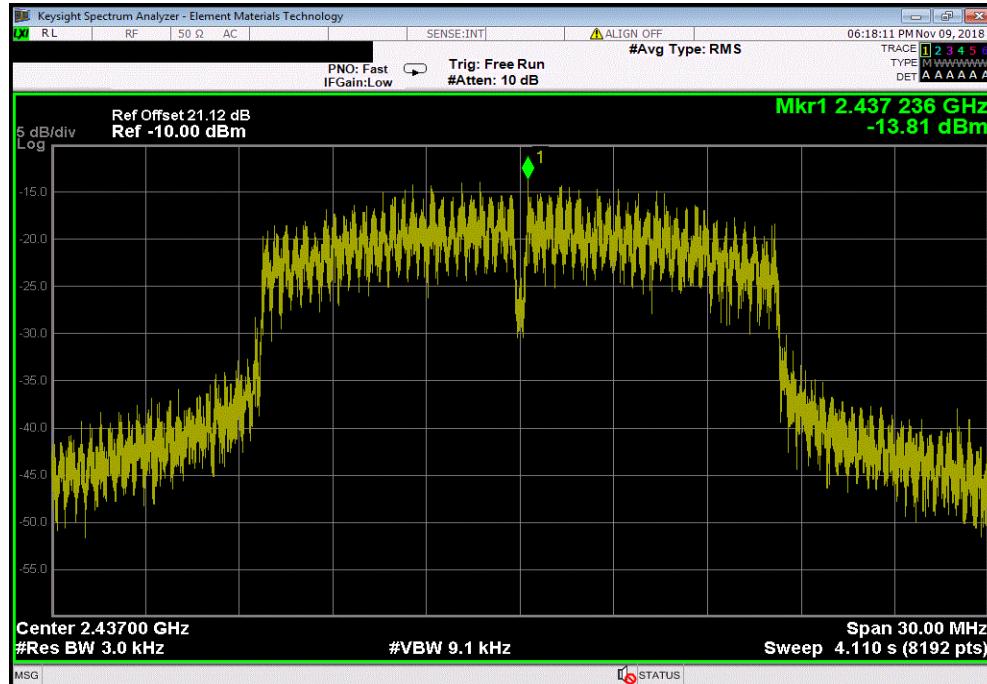
| EUT: | VISTA XLT | | Work Order: | WTVD0014 | |
|--|----------------------------|------------------|-------------------|---------------------|---------|
| Serial Number: | VXL1-000683 XBC1-001149 | | Date: | 9-Nov-18 | |
| Customer: | WatchGuard Video | | Temperature: | 22.7 °C | |
| Attendees: | Navaid Karimi | | Humidity: | 34.5% RH | |
| Project: | None | | Barometric Pres.: | 1026 mbar | |
| Tested by: | Jonathan Kiefer | Power: | Battery | Job Site: | TX09 |
| TEST SPECIFICATIONS | | Test Method | | | |
| FCC 15.247:2018 | | ANSI C63.10:2013 | | | |
| COMMENTS | | | | | |
| Ref Offset of 21.12 dB (20 dB Attenuator + DC Block + Cable). Integral antenna with antenna gain of 2.2 dBi. | | | | | |
| DEVIATIONS FROM TEST STANDARD | | | | | |
| None | | | | | |
| Configuration # | 2 | Signature | | | |
| | | | Value dBm/3kHz | Limit < dBm/3kHz | Results |
| 2400 MHz - 2483.5 MHz Band | | | | | |
| 802.11(g) 6 Mbps | Single Channel 6, 2437 MHz | | -13.805 | 8 | Pass |
| 802.11(g) 36 Mbps | Single Channel 6, 2437 MHz | | -15.7 | 8 | Pass |
| 802.11(g) 54 Mbps | Single Channel 6, 2437 MHz | | -18.975 | 8 | Pass |
| 802.11(n) MCS0 | Single Channel 6, 2437 MHz | | -15.091 | 8 | Pass |
| 802.11(n) MCS4 | Single Channel 6, 2437 MHz | | -17.073 | 8 | Pass |
| 802.11(n) MCS7 | Single Channel 6, 2437 MHz | | -19.792 | 8 | Pass |

POWER SPECTRAL DENSITY

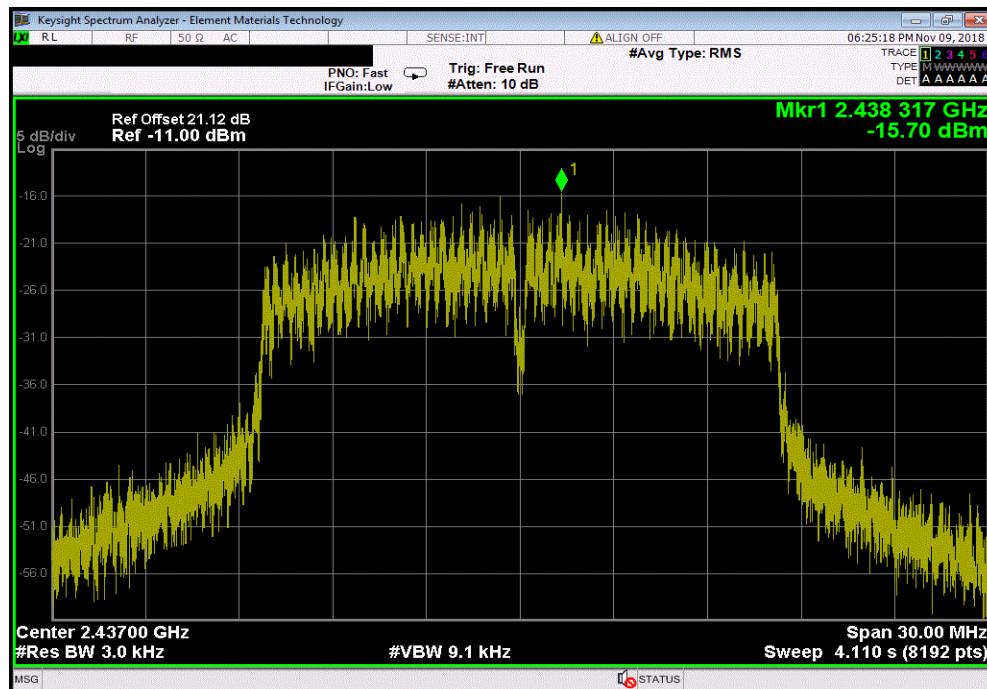


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | |
|--|------------|---|---------|
| Value | Limit | | Results |
| dBm/3kHz | < dBm/3kHz | 8 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | |
|---|------------|---|---------|
| Value | Limit | | Results |
| dBm/3kHz | < dBm/3kHz | 8 | Pass |

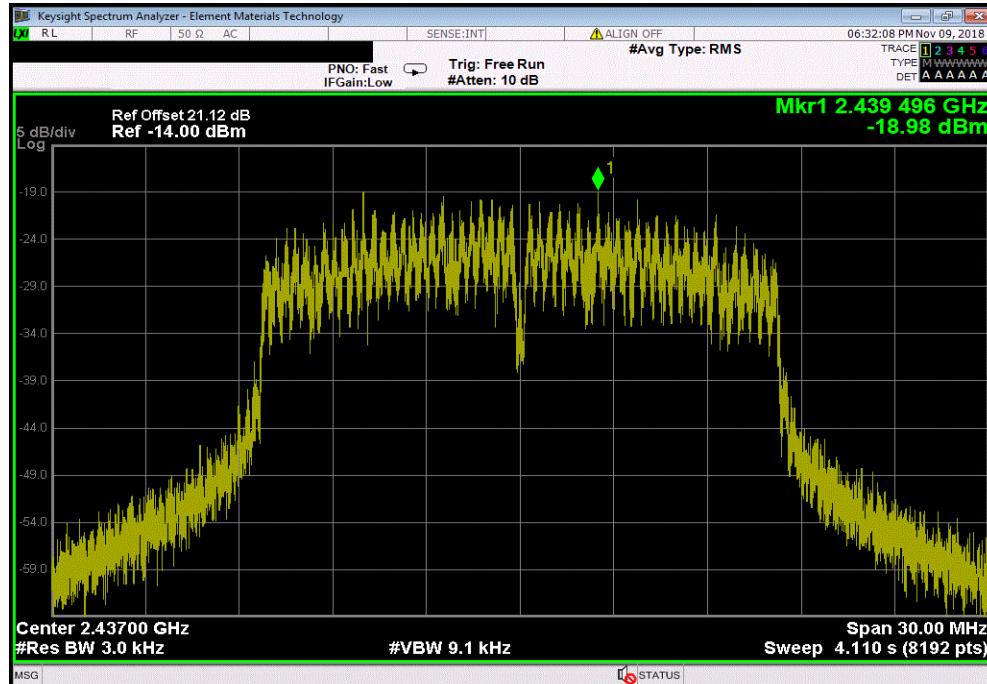


POWER SPECTRAL DENSITY

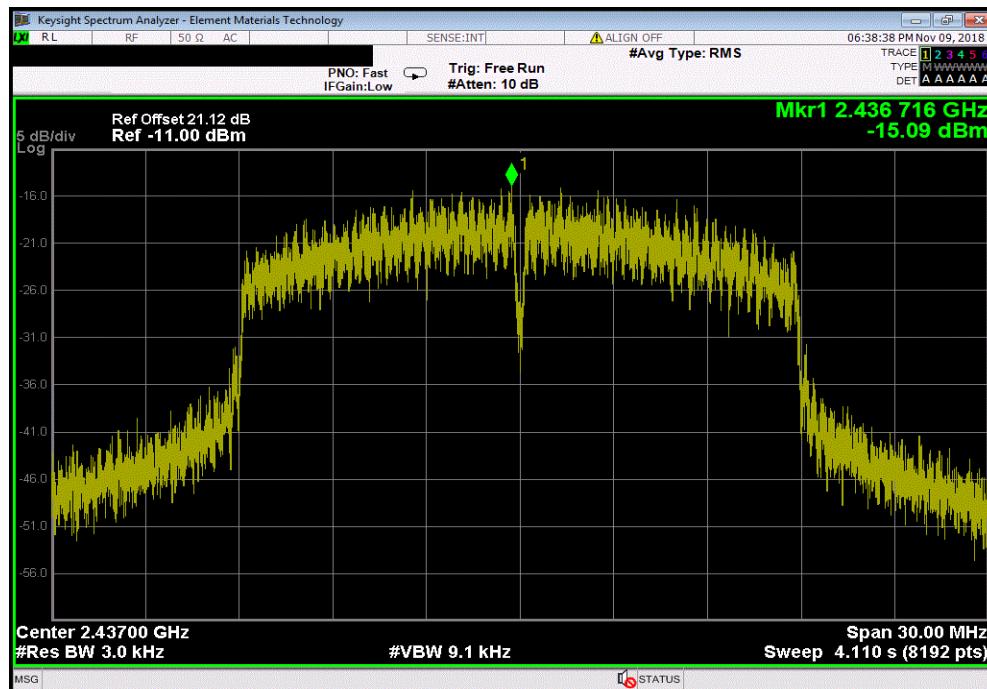


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | |
|---|------------|--|---------|
| Value | Limit | | Results |
| dBm/3kHz | < dBm/3kHz | | |
| -18.975 | 8 | | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | |
|--|------------|--|---------|
| Value | Limit | | Results |
| dBm/3kHz | < dBm/3kHz | | |
| -15.091 | 8 | | Pass |

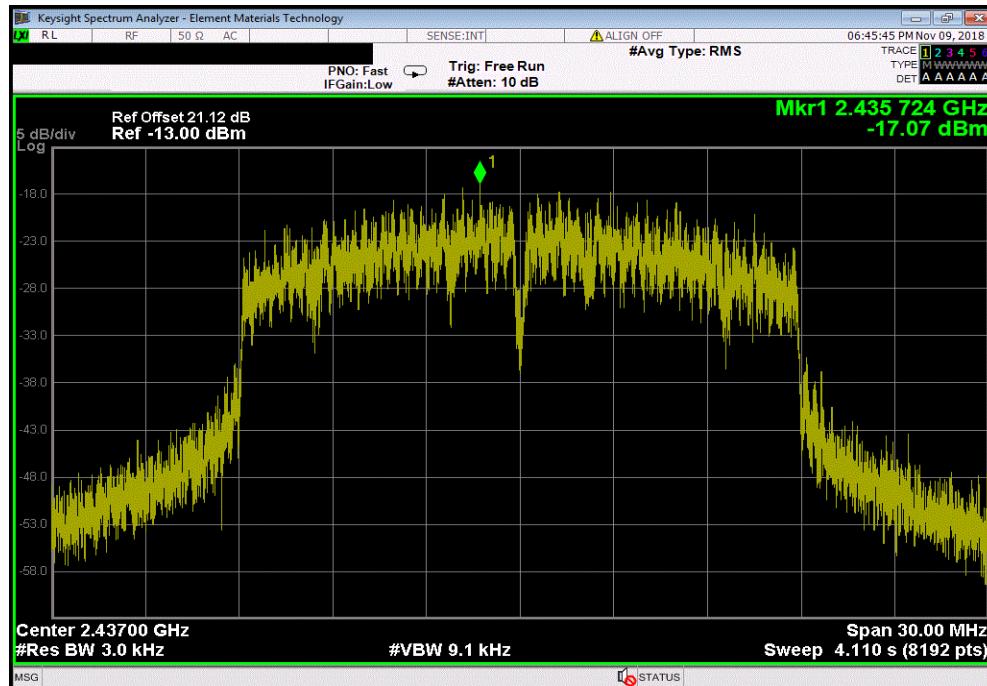


POWER SPECTRAL DENSITY

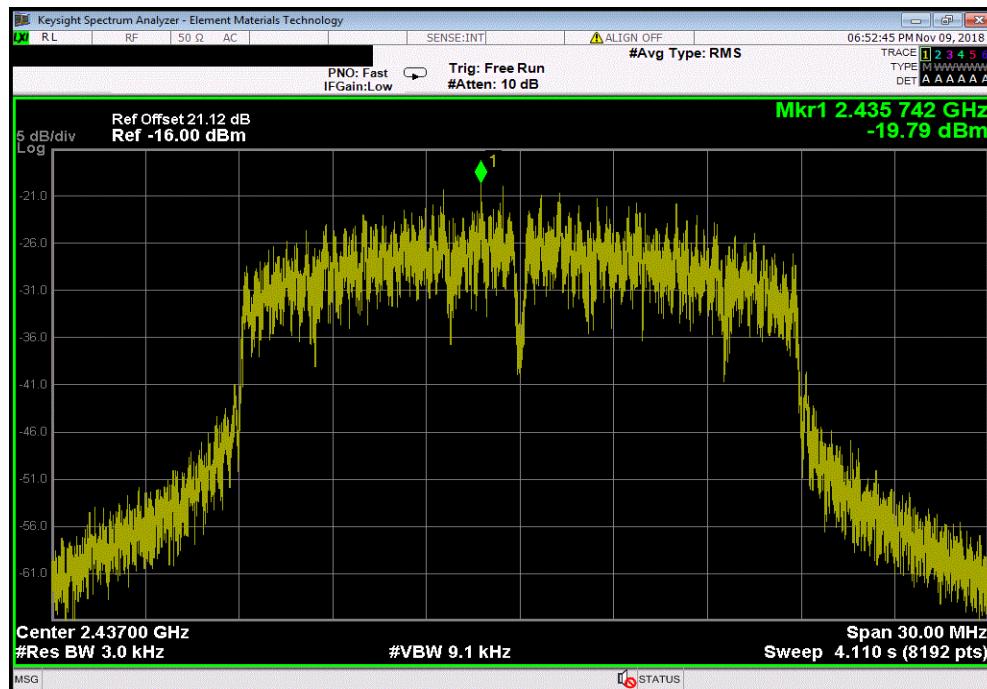


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | |
|--|------------|---------|--|
| Value | Limit | Results | |
| dBm/3kHz | < dBm/3kHz | | |
| -17.073 | 8 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | |
|--|------------|---------|--|
| Value | Limit | Results | |
| dBm/3kHz | < dBm/3kHz | | |
| -19.792 | 8 | Pass | |



BAND EDGE COMPLIANCE



XMIT 2017.12.13

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

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Cal. Due |
|------------------------------|--------------------|-----------------------|-----|-----------|-----------|
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFM | 19-Mar-18 | 19-Mar-19 |
| Cable | Micro-Coax | UFD150A-1-0720-200200 | TXG | 10-Oct-18 | 10-Oct-19 |
| Block - DC | Fairview Microwave | SD3379 | AMM | 29-Mar-18 | 29-Mar-19 |
| Attenuator | Fairview Microwave | SA4018-20 | TYW | 29-Mar-18 | 29-Mar-19 |

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set its single channel of operation. The EUT was transmitting at the data rate(s) listed in the datasheet.

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

An RMS detector was used to match the method called out for Output Power. Because the reference level was taken with an RMS detector, the attenuation requirement is -30 dBc.

BAND EDGE COMPLIANCE



XMi 2017.12.13

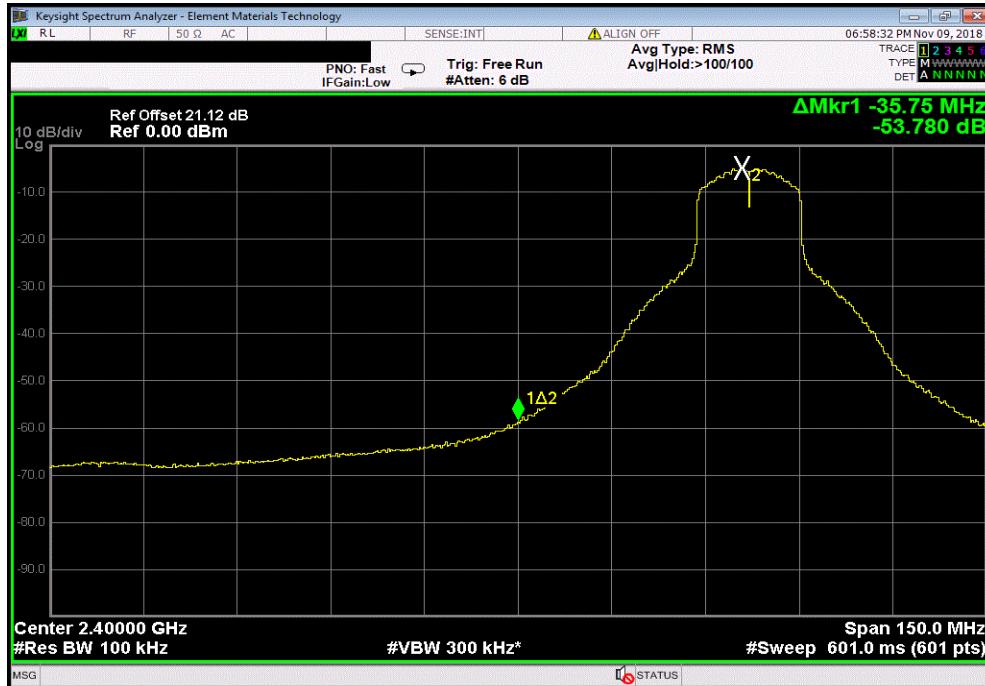
| EUT: | VISTA XLT | Work Order: | WTVD0014 | |
|-------------------------------|--|--------------------|------------------|--------------|
| Serial Number: | VXL1-000683 XBC1-001149 | Date: | 9-Nov-18 | |
| Customer: | WatchGuard Video | Temperature: | 22.7 °C | |
| Attendees: | Navaid Karimi | Humidity: | 34.5% RH | |
| Project: | None | Barometric Pres.: | 1024 mbar | |
| Tested by: | Jonathan Kiefer | Job Site: | TX09 | |
| TEST SPECIFICATIONS | Power: Battery | Test Method | | |
| FCC 15.247:2018 | | ANSI C63.10:2013 | | |
| COMMENTS | Ref Offset of 21.12 dB (20 dB Attenuator + DC Block + Cable). Integral antenna with antenna gain of 2.2 dBi. | | | |
| DEVIATIONS FROM TEST STANDARD | | | | |
| None | | | | |
| Configuration # | 2 | Signature | Jonathan Kiefer | |
| | | Value (dBc) | Limit ≤ (dBc) | Result |
| 2400 MHz - 2483.5 MHz Band | | | | |
| 802.11(g) 6 Mbps | Single Channel 6, 2437 MHz (2400 MHz Band Edge) Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | -53.78 -58.589 | -30 -30 | Pass Pass |
| 802.11(g) 36 Mbps | Single Channel 6, 2437 MHz (2400 MHz Band Edge) Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | -56.18 -58.127 | -30 -30 | Pass Pass |
| 802.11(g) 54 Mbps | Single Channel 6, 2437 MHz (2400 MHz Band Edge) Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | -54.917 -56.477 | -30 -30 | Pass Pass |
| 802.11(n) MCS0 | Single Channel 6, 2437 MHz (2400 MHz Band Edge) Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | -55.193 -59.011 | -30 -30 | Pass Pass |
| 802.11(n) MCS4 | Single Channel 6, 2437 MHz (2400 MHz Band Edge) Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | -55.957 -58.709 | -30 -30 | Pass Pass |
| 802.11(n) MCS7 | Single Channel 6, 2437 MHz (2400 MHz Band Edge) Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | -54.903 -55.542 | -30 -30 | Pass Pass |

BAND EDGE COMPLIANCE

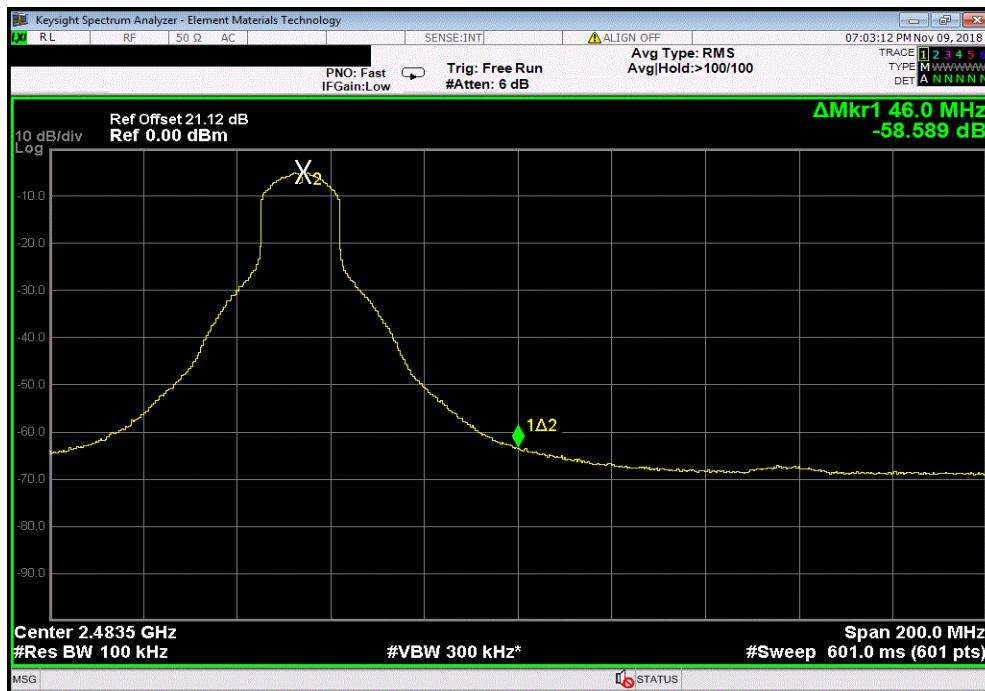


XMT 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz (2400 MHz Band Edge) | | | |
|---|------------------|--------|--|
| Value (dBc) | Limit ≤ (dBc) | Result | |
| -53.78 | -30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | | | |
|---|------------------|--------|--|
| Value (dBc) | Limit ≤ (dBc) | Result | |
| -58.589 | -30 | Pass | |



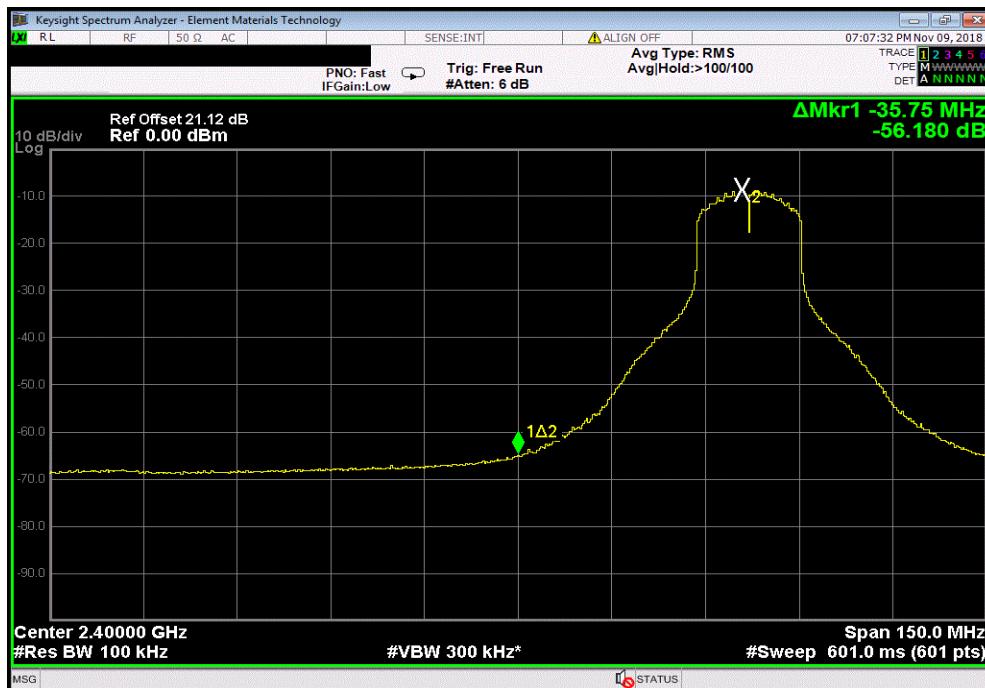
BAND EDGE COMPLIANCE



XMT 2017.12.13

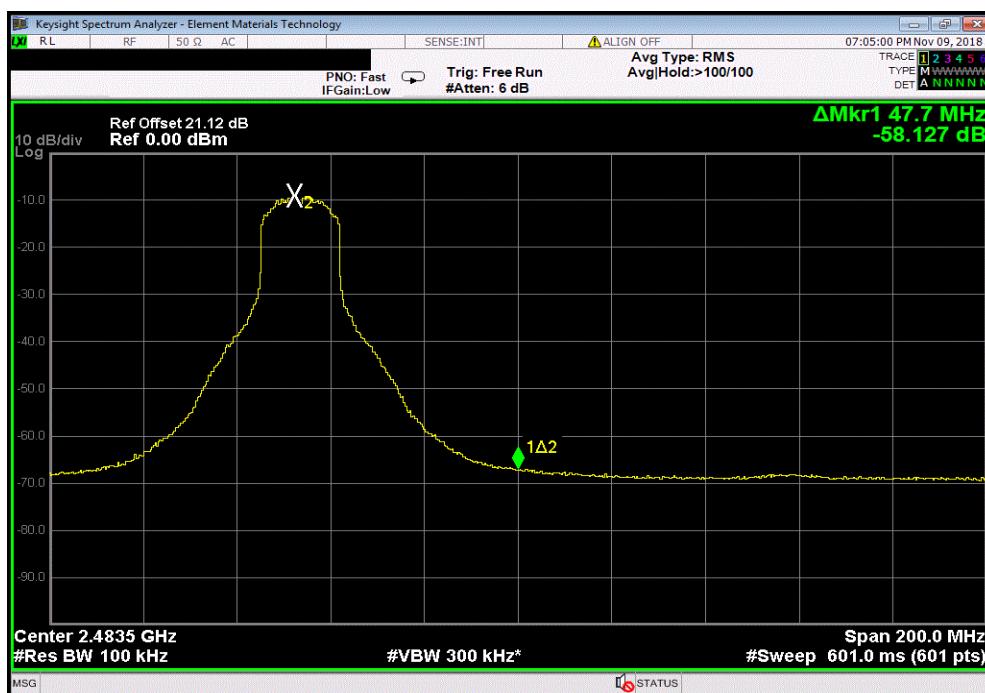
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz (2400 MHz Band Edge)

| | Value (dBc) | Limit ≤ (dBc) | Result |
|--|----------------|------------------|--------|
| | -56.18 | -30 | Pass |



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz (2483.5 MHz Band Edge)

| | Value (dBc) | Limit ≤ (dBc) | Result |
|--|----------------|------------------|--------|
| | -58.127 | -30 | Pass |



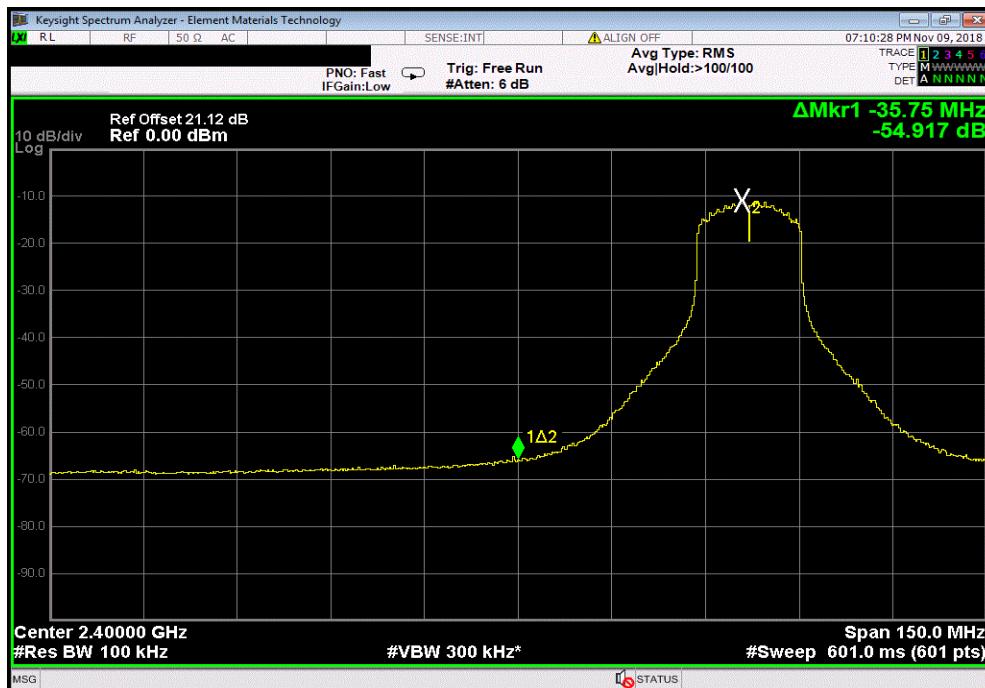
BAND EDGE COMPLIANCE



XMI 2017.12.13

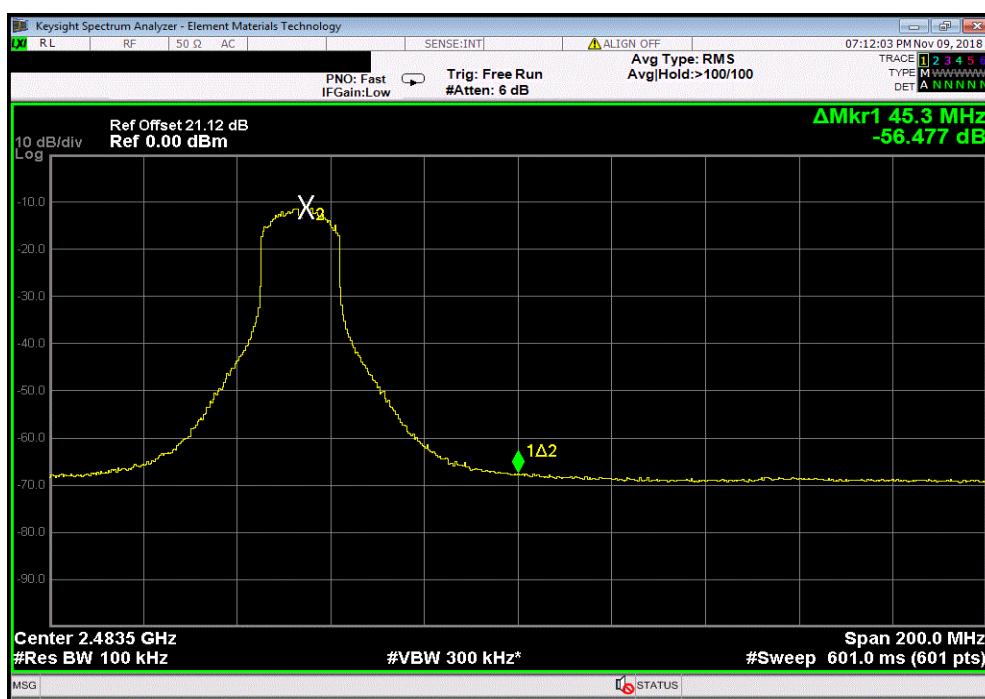
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz (2400 MHz Band Edge)

| | Value (dBc) | Limit ≤ (dBc) | Result |
|--|----------------|------------------|--------|
| | -54.917 | -30 | Pass |



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz (2483.5 MHz Band Edge)

| | Value (dBc) | Limit ≤ (dBc) | Result |
|--|----------------|------------------|--------|
| | -56.477 | -30 | Pass |



BAND EDGE COMPLIANCE

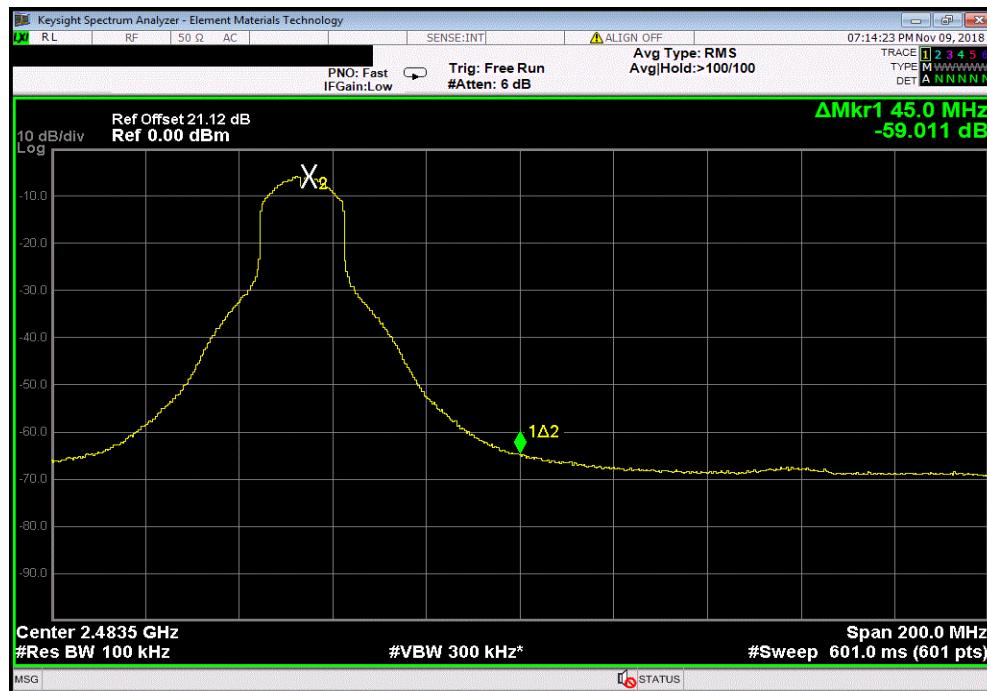


XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz (2400 MHz Band Edge) | | | |
|---|------------------|--------|--|
| Value (dBc) | Limit ≤ (dBc) | Result | |
| -55.193 | -30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | | | |
|---|------------------|--------|--|
| Value (dBc) | Limit ≤ (dBc) | Result | |
| -59.011 | -30 | Pass | |

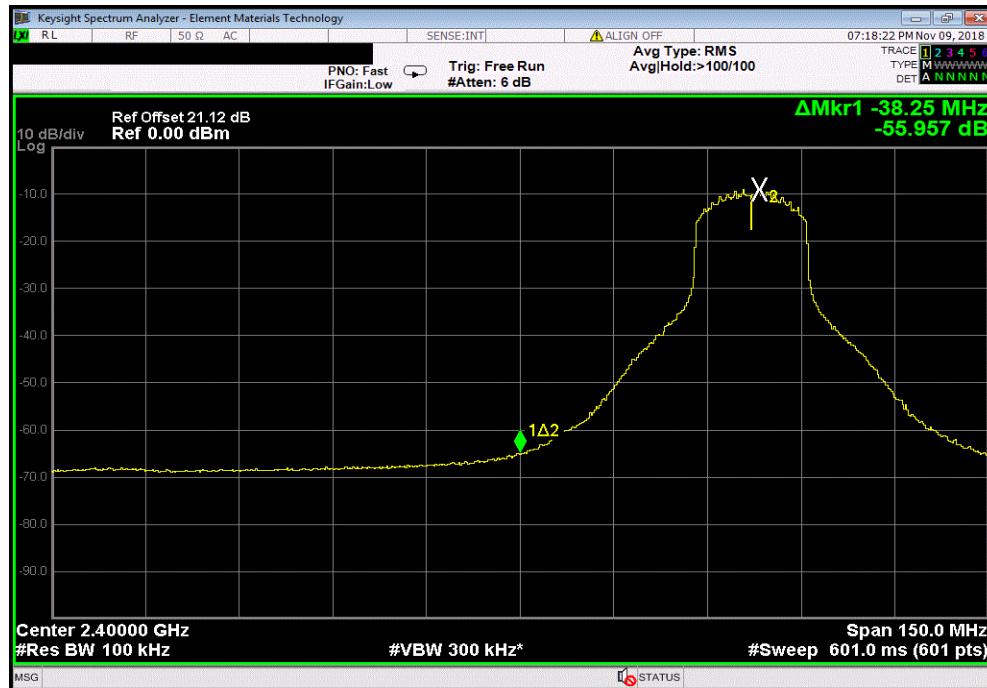


BAND EDGE COMPLIANCE

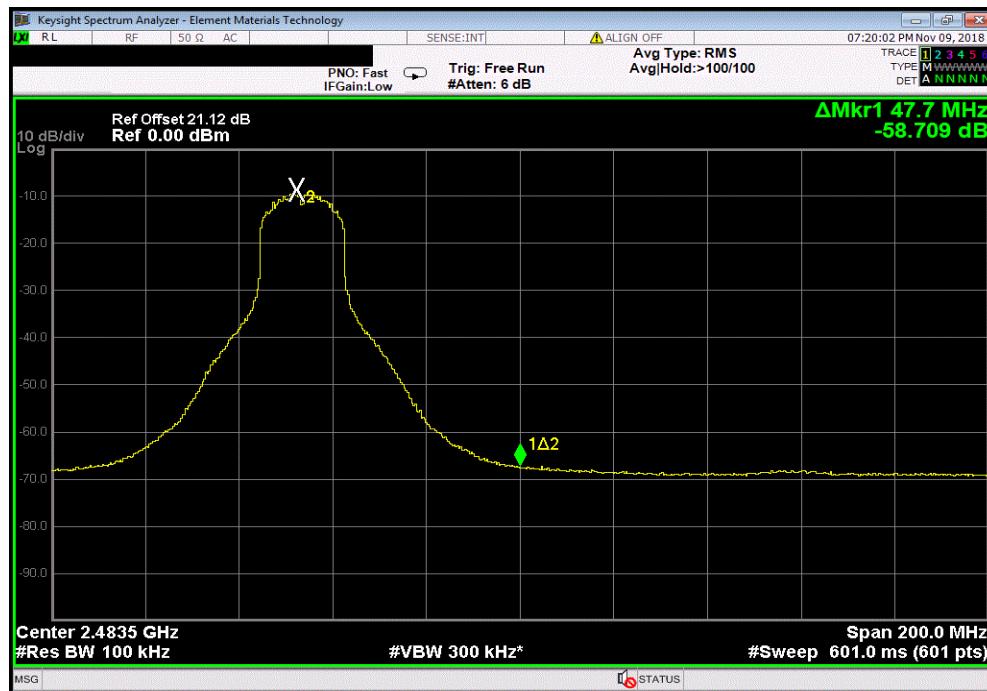


XMT 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz (2400 MHz Band Edge) | | |
|---|------------------|--------|
| Value (dBc) | Limit ≤ (dBc) | Result |
| -55.957 | -30 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | | |
|---|------------------|--------|
| Value (dBc) | Limit ≤ (dBc) | Result |
| -58.709 | -30 | Pass |



BAND EDGE COMPLIANCE

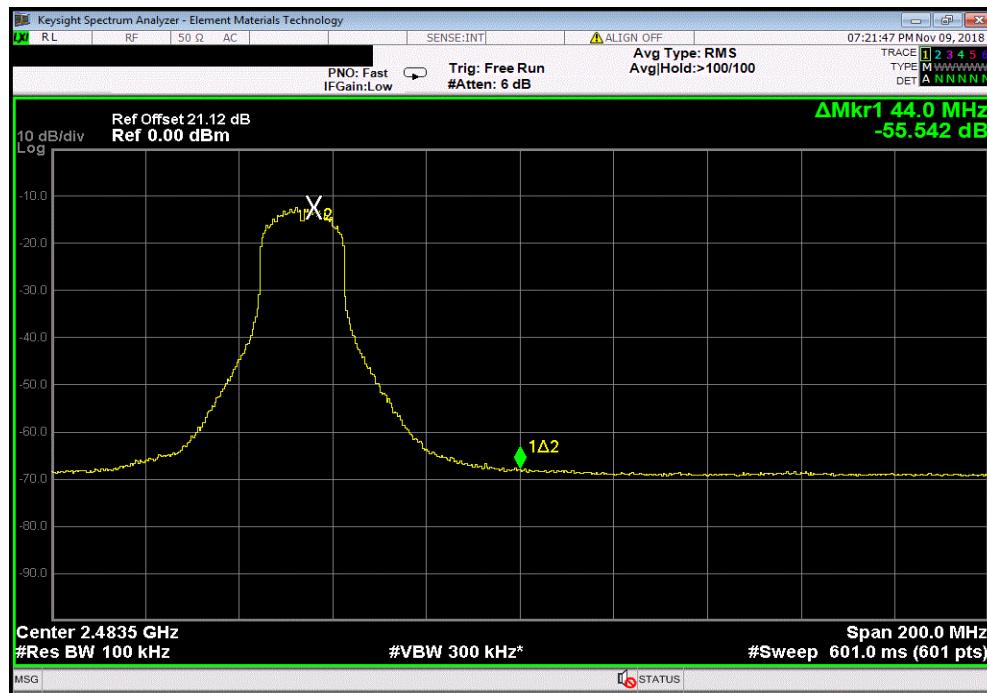


XMT 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz (2400 MHz Band Edge) | | | |
|---|------------------|--------|--|
| Value (dBc) | Limit ≤ (dBc) | Result | |
| -54.903 | -30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz (2483.5 MHz Band Edge) | | | |
|---|------------------|--------|--|
| Value (dBc) | Limit ≤ (dBc) | Result | |
| -55.542 | -30 | Pass | |



SPURIOUS CONDUCTED EMISSIONS



XMit 2017.12.13

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

TEST EQUIPMENT

| Description | Manufacturer | Model | ID | Last Cal. | Cal. Due |
|------------------------------|--------------------|-----------------------|-----|-----------|-----------|
| Attenuator | Fairview Microwave | SA4018-20 | TYW | 29-Mar-18 | 29-Mar-19 |
| Block - DC | Fairview Microwave | SD3379 | AMM | 29-Mar-18 | 29-Mar-19 |
| Cable | Micro-Coax | UFD150A-1-0720-200200 | TXG | 10-Oct-18 | 10-Oct-19 |
| Analyzer - Spectrum Analyzer | Keysight | N9010A | AFM | 19-Mar-18 | 19-Mar-19 |

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions were measured with the EUT set its single channel of operation. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

SPURIOUS CONDUCTED EMISSIONS



TbTx 2018.09.13

XMi 2017.12.13

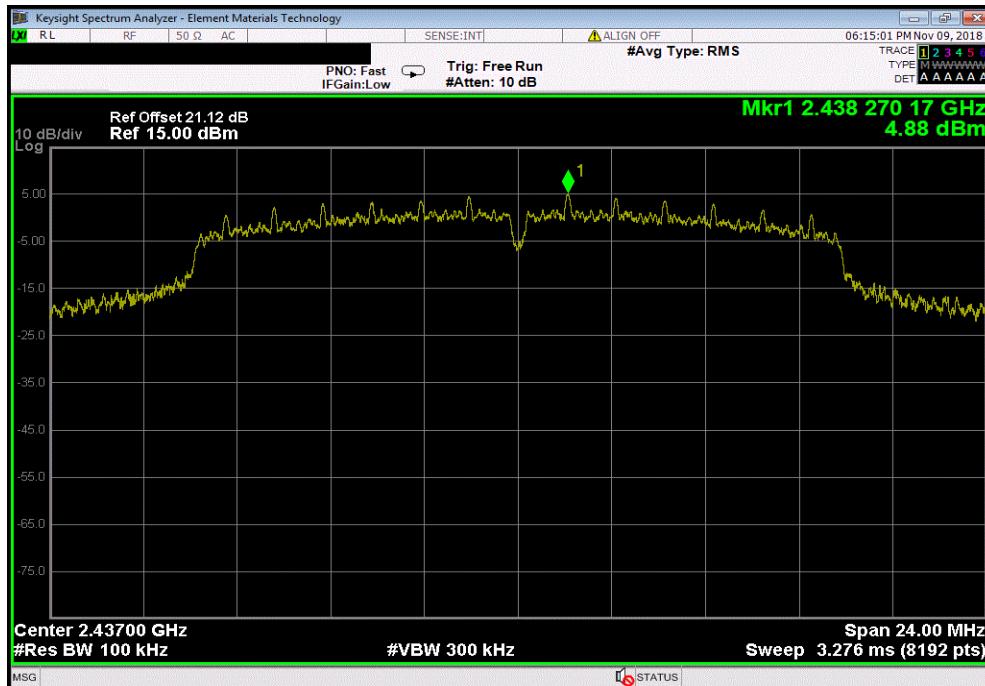
| EUT: | VISTA XLT | Work Order: | WTVD0014 | | | |
|--|-------------------------|------------------------|---------------------|-----------------|---------------|--------|
| Serial Number: | VXL1-000683 XBC1-001149 | Date: | 9-Nov-18 | | | |
| Customer: | WatchGuard Video | Temperature: | 22.7 °C | | | |
| Attendees: | Navaid Karimi | Humidity: | 34.5% RH | | | |
| Project: | None | Barometric Pres.: | 1026 mbar | | | |
| Tested by: | Jonathan Kiefer | Power: | Battery | | | |
| TEST SPECIFICATIONS | | Test Method | ANSI C63.10:2013 | | | |
| FCC 15.247:2018 | | | | | | |
| COMMENTS | | | | | | |
| Ref Offset of 21.12 dB (20 dB Attenuator + DC Block + Cable). Integral antenna with antenna gain of 2.2 dBi. | | | | | | |
| DEVIATIONS FROM TEST STANDARD | | | | | | |
| None | | | | | | |
| Configuration # | 2 | Signature | | | | |
| | | <i>Jonathan Kiefer</i> | | | | |
| | | Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result |
| 2400 MHz - 2483.5 MHz Band | | | | | | |
| 802.11(g) 6 Mbps | | | | | | |
| Single Channel 6, 2437 MHz | Fundamental | 2438.27 | N/A | N/A | N/A | Pass |
| Single Channel 6, 2437 MHz | 30 MHz - 12.5 GHz | 5688.77 | -64.05 | -30 | | |
| Single Channel 6, 2437 MHz | 12.5 GHz - 25 GHz | 24964.9 | -53.19 | -30 | | |
| 802.11(g) 36 Mbps | | | | | | |
| Single Channel 6, 2437 MHz | Fundamental | 2438.27 | N/A | N/A | N/A | Pass |
| Single Channel 6, 2437 MHz | 30 MHz - 12.5 GHz | 2545.01 | -61.92 | -30 | | |
| Single Channel 6, 2437 MHz | 12.5 GHz - 25 GHz | 24845.87 | -51.23 | -30 | | |
| 802.11(g) 54 Mbps | | | | | | |
| Single Channel 6, 2437 MHz | Fundamental | 2438.27 | N/A | N/A | N/A | Pass |
| Single Channel 6, 2437 MHz | 30 MHz - 12.5 GHz | 3211.82 | -60.31 | -30 | | |
| Single Channel 6, 2437 MHz | 12.5 GHz - 25 GHz | 24964.9 | -49.74 | -30 | | |
| 802.11(n) MCS0 | | | | | | |
| Single Channel 6, 2437 MHz | Fundamental | 2438.27 | N/A | N/A | N/A | Pass |
| Single Channel 6, 2437 MHz | 30 MHz - 12.5 GHz | 3230.09 | -63.33 | -30 | | |
| Single Channel 6, 2437 MHz | 12.5 GHz - 25 GHz | 24855.02 | -52.54 | -30 | | |
| 802.11(n) MCS4 | | | | | | |
| Single Channel 6, 2437 MHz | Fundamental | 2438.27 | N/A | N/A | N/A | Pass |
| Single Channel 6, 2437 MHz | 30 MHz - 12.5 GHz | 3170.72 | -62.04 | -30 | | |
| Single Channel 6, 2437 MHz | 12.5 GHz - 25 GHz | 24995.42 | -51.41 | -30 | | |
| 802.11(n) MCS7 | | | | | | |
| Single Channel 6, 2437 MHz | Fundamental | 2438.27 | N/A | N/A | N/A | Pass |
| Single Channel 6, 2437 MHz | 30 MHz - 12.5 GHz | 5713.13 | -59.71 | -30 | | |
| Single Channel 6, 2437 MHz | 12.5 GHz - 25 GHz | 24835.19 | -48.84 | -30 | | |

SPURIOUS CONDUCTED EMISSIONS

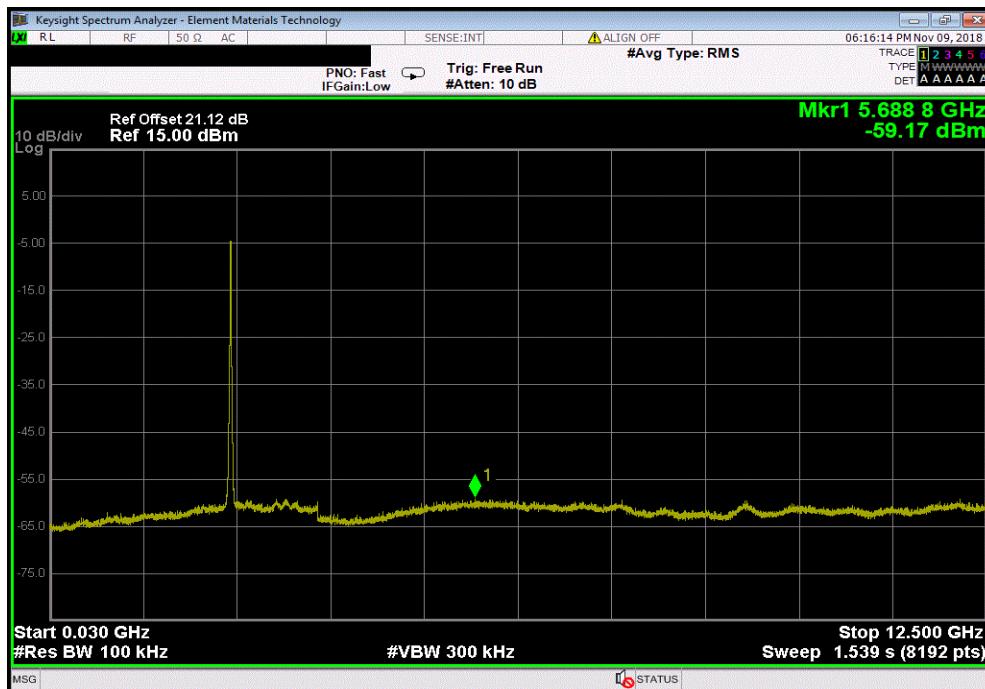


TbTx 2018.09.13 XM1 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| Fundamental | 2438.27 | N/A | N/A | N/A | |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| 30 MHz - 12.5 GHz | 5688.77 | -64.05 | -30 | Pass | |



SPURIOUS CONDUCTED EMISSIONS

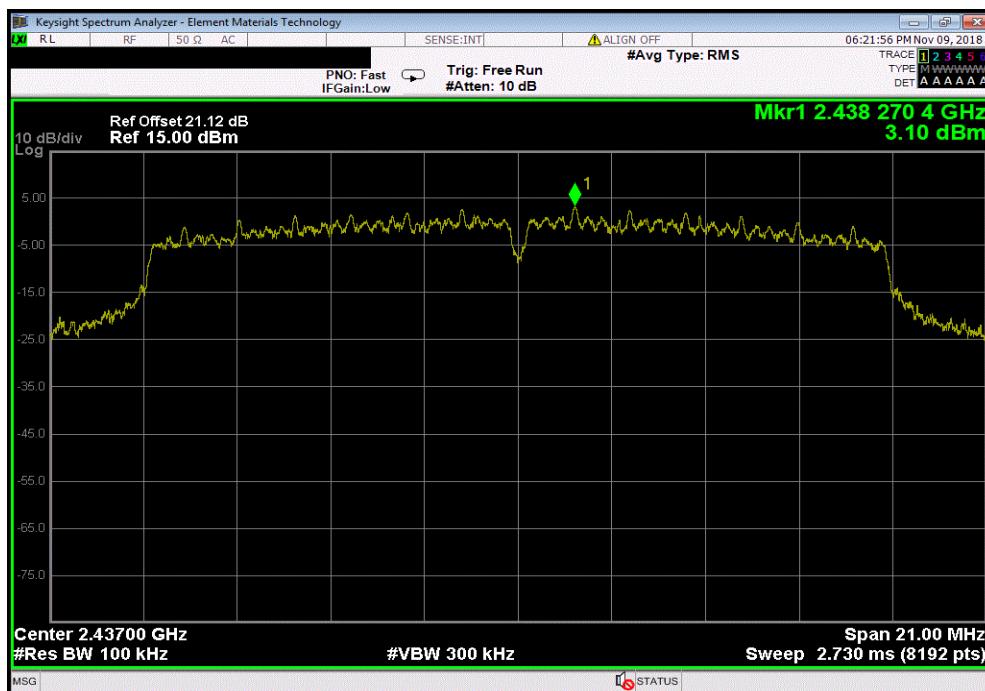


TbTx 2018.09.13 XM1 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| 12.5 GHz - 25 GHz | 24964.9 | -53.19 | -30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| Fundamental | 2438.27 | N/A | N/A | N/A | |

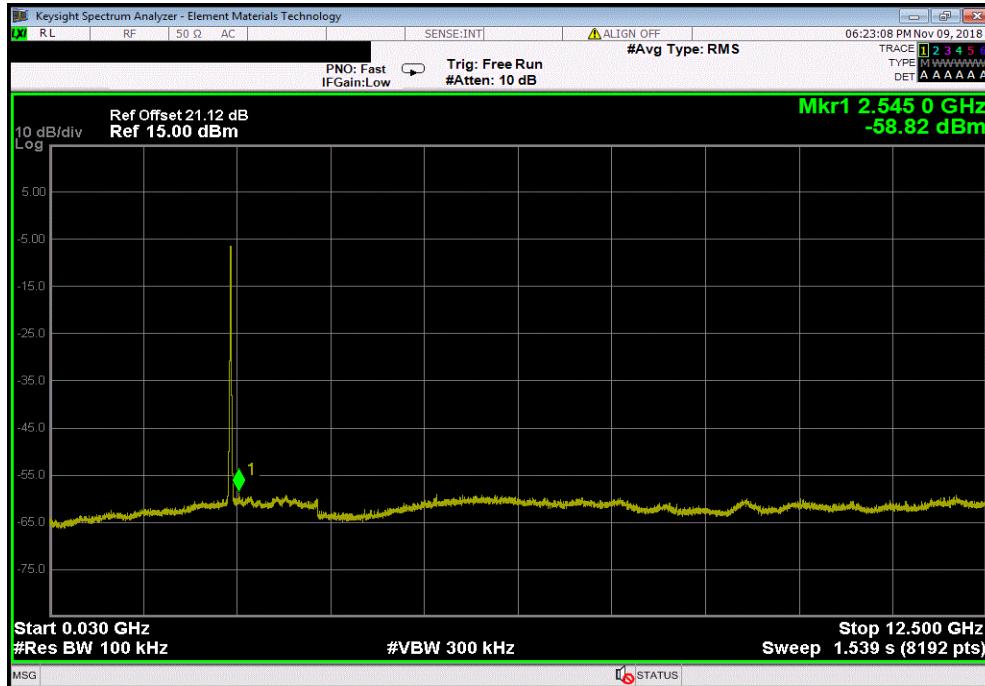


SPURIOUS CONDUCTED EMISSIONS

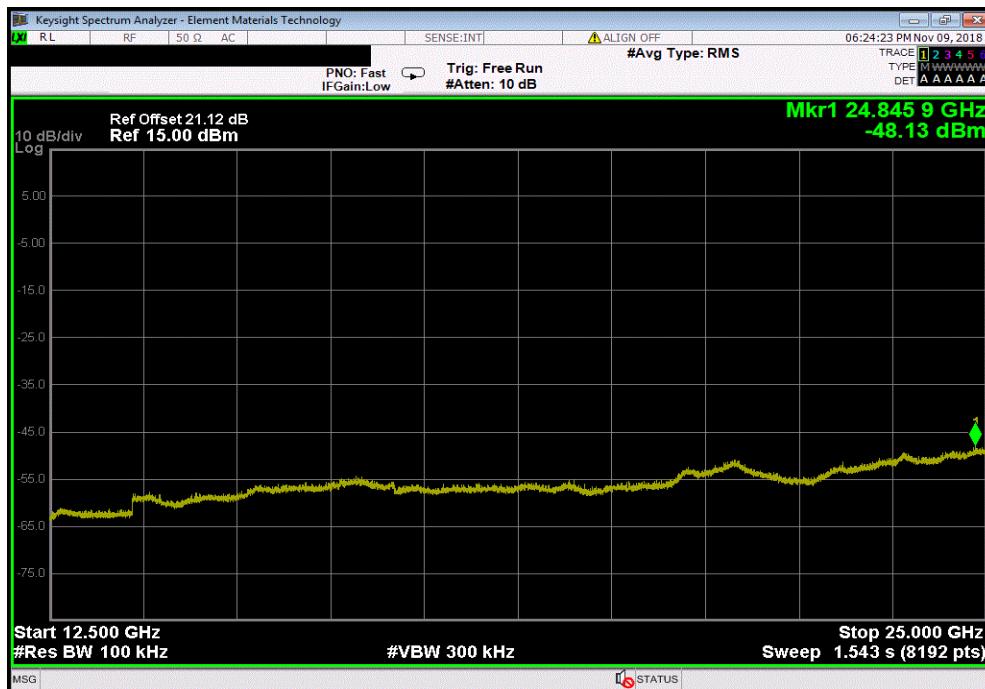


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | | |
|---|---------------------|-----------------|---------------|--------|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result |
| 30 MHz - 12.5 GHz | 2545.01 | -61.92 | -30 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Single Channel 6, 2437 MHz | | | | |
|---|---------------------|-----------------|---------------|--------|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result |
| 12.5 GHz - 25 GHz | 24845.87 | -51.23 | -30 | Pass |

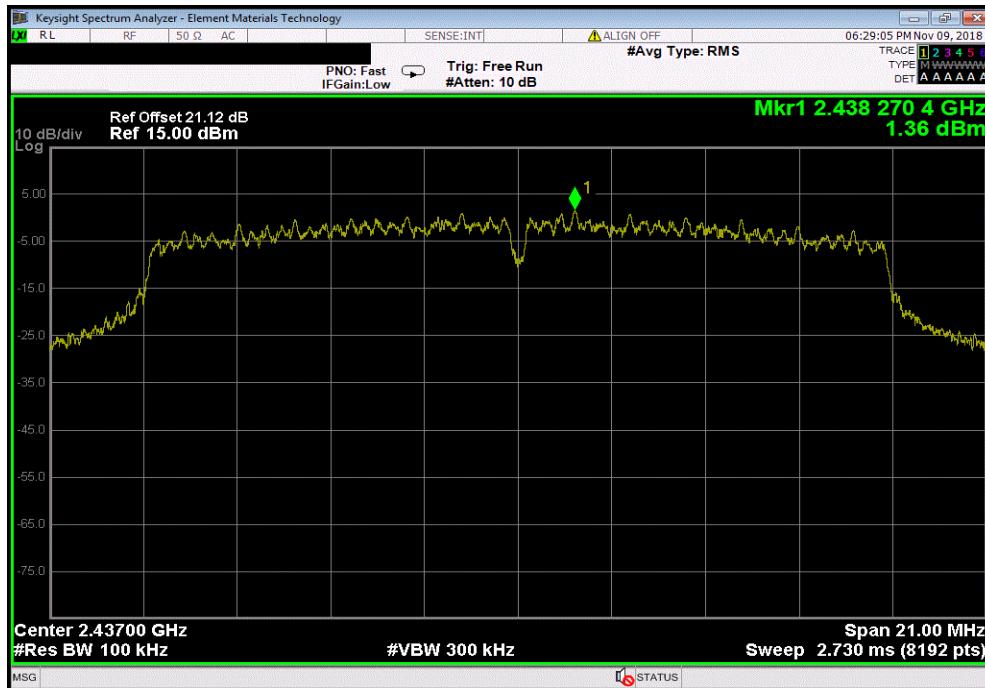


SPURIOUS CONDUCTED EMISSIONS

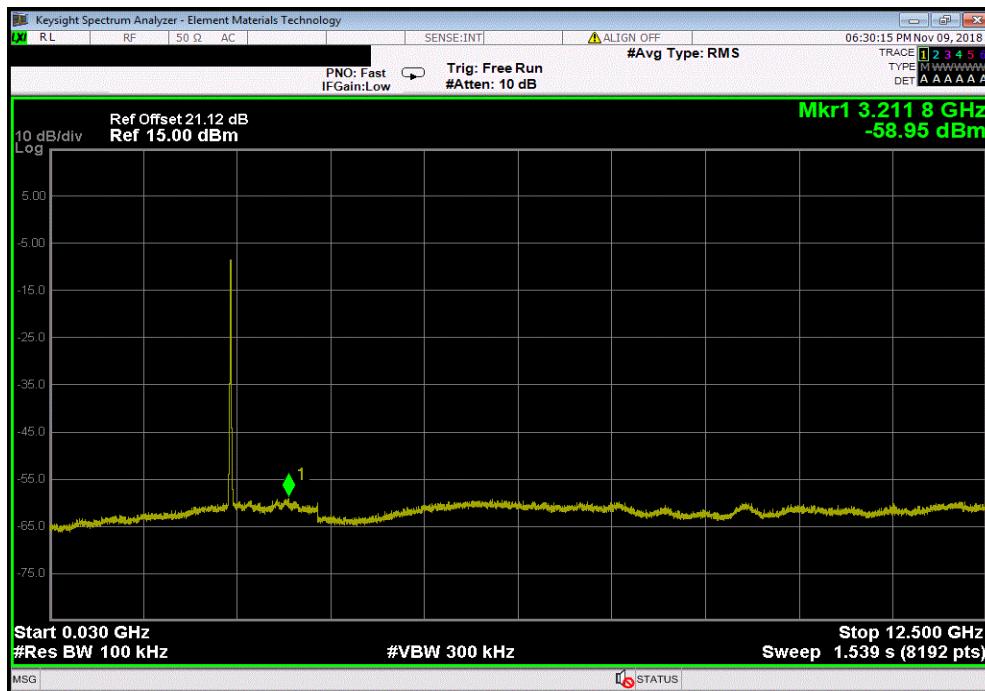


TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| Fundamental | 2438.27 | N/A | N/A | N/A | |



| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| 30 MHz - 12.5 GHz | 3211.82 | -60.31 | -30 | Pass | |

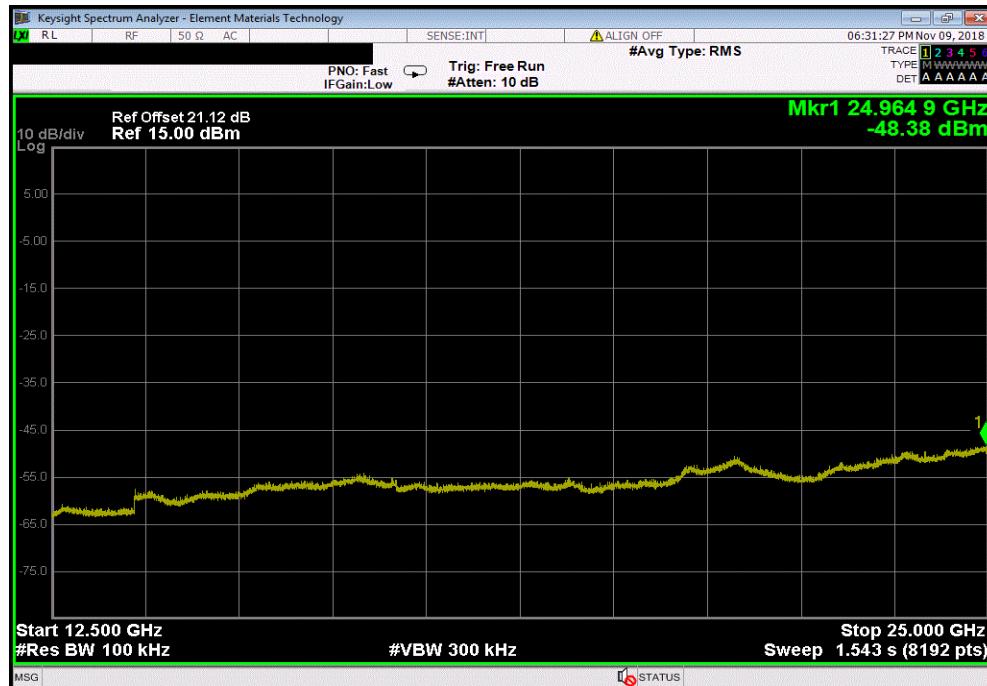


SPURIOUS CONDUCTED EMISSIONS

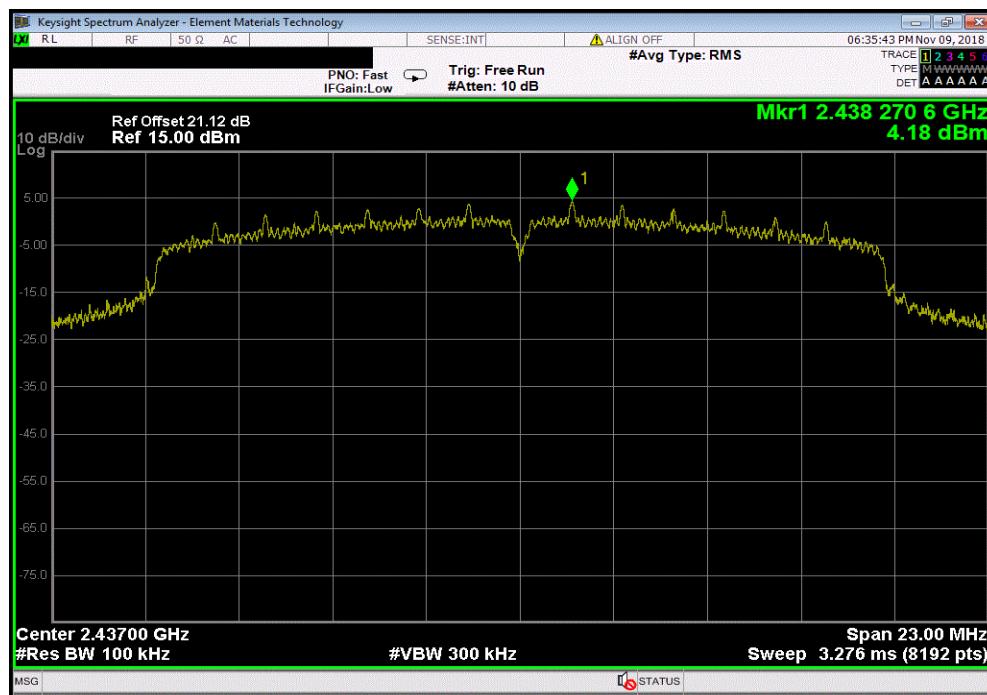


TbTx 2018.09.13 XM1 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Single Channel 6, 2437 MHz | | | | | |
|---|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| 12.5 GHz - 25 GHz | 24964.9 | -49.74 | -30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| Fundamental | 2438.27 | N/A | N/A | N/A | |

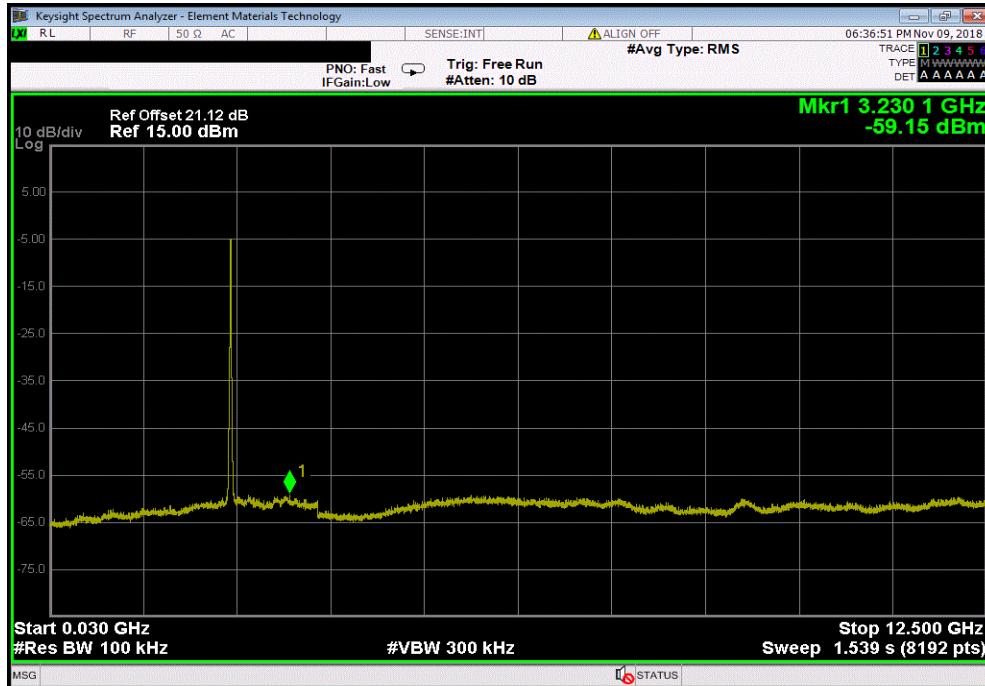


SPURIOUS CONDUCTED EMISSIONS

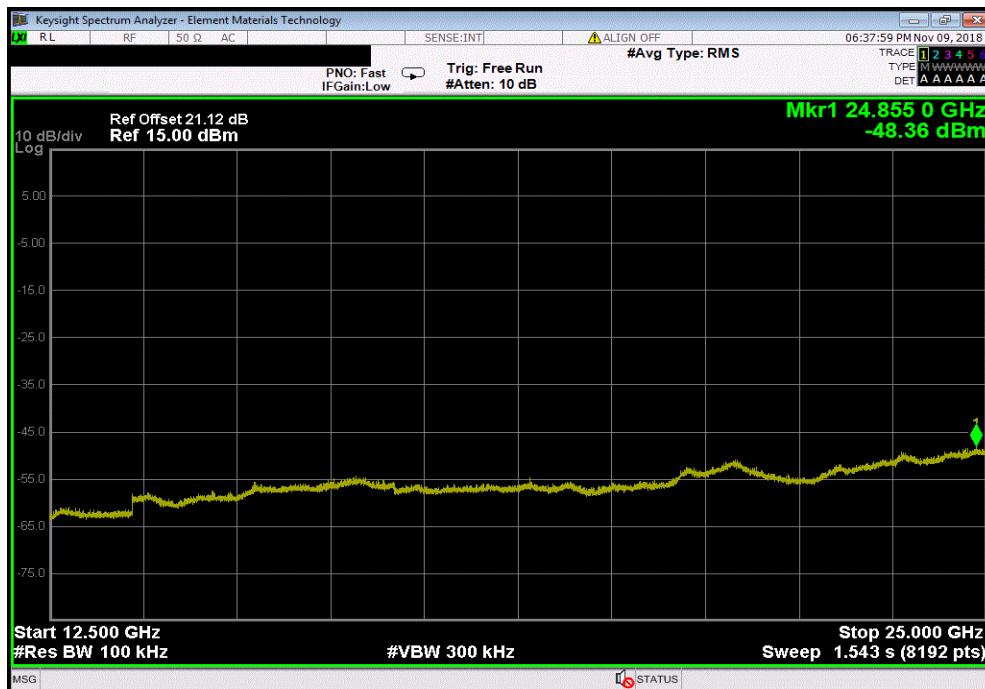


TbTx 2018.09.13 XM1 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | | |
|--|---------------------|-----------------|---------------|--------|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result |
| 30 MHz - 12.5 GHz | 3230.09 | -63.33 | -30 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Single Channel 6, 2437 MHz | | | | |
|--|---------------------|-----------------|---------------|--------|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result |
| 12.5 GHz - 25 GHz | 24855.02 | -52.54 | -30 | Pass |

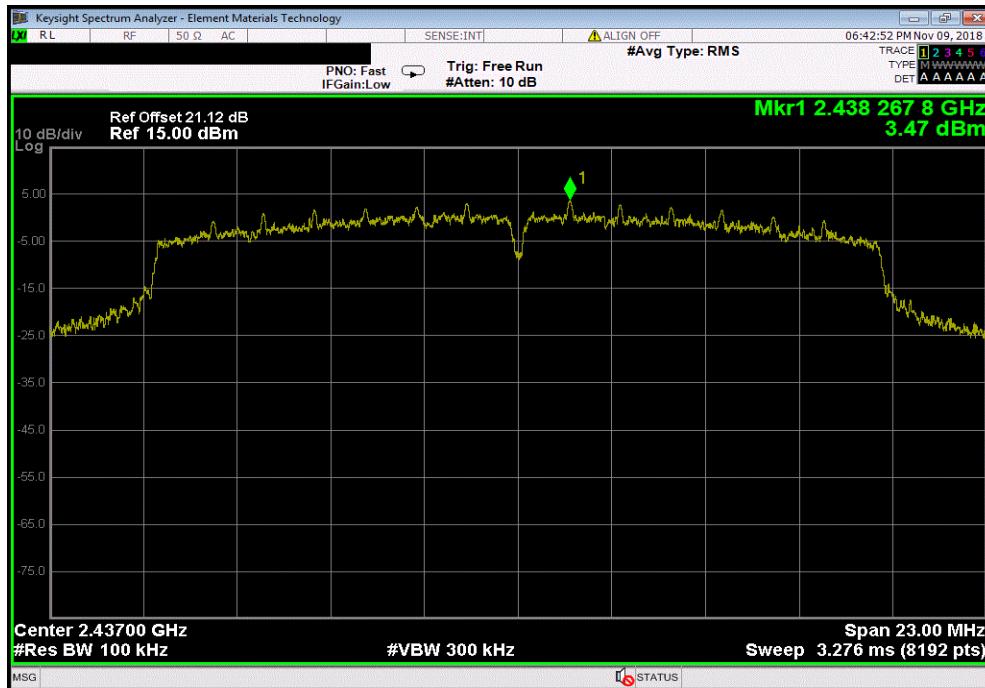


SPURIOUS CONDUCTED EMISSIONS

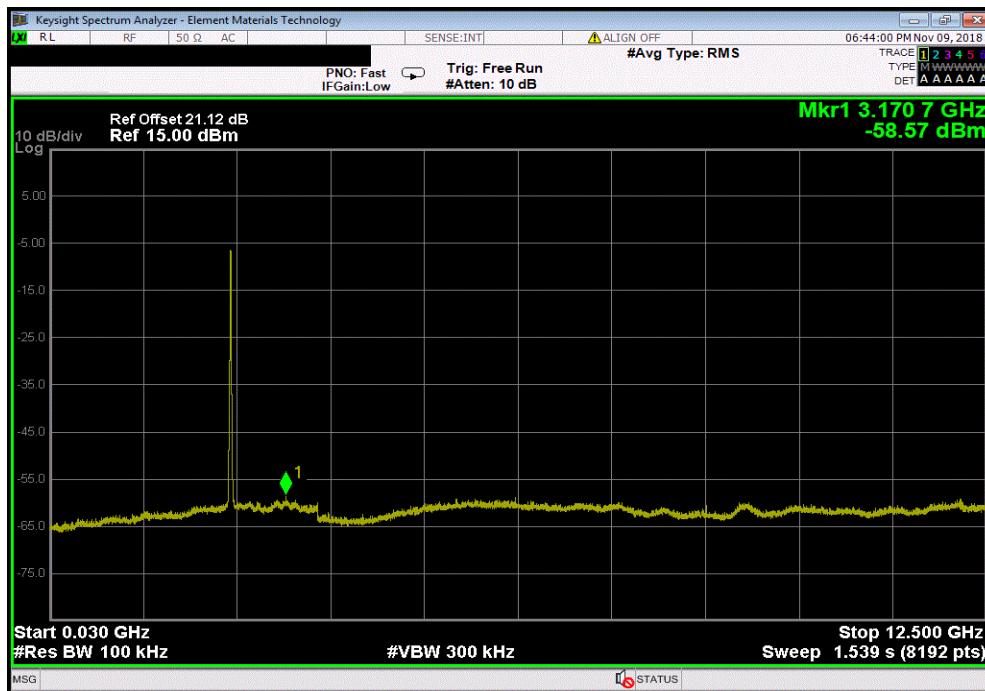


TbTx 2018.09.13 XM1 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| Fundamental | 2438.27 | N/A | N/A | N/A | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| 30 MHz - 12.5 GHz | 3170.72 | -62.04 | -30 | Pass | |



SPURIOUS CONDUCTED EMISSIONS

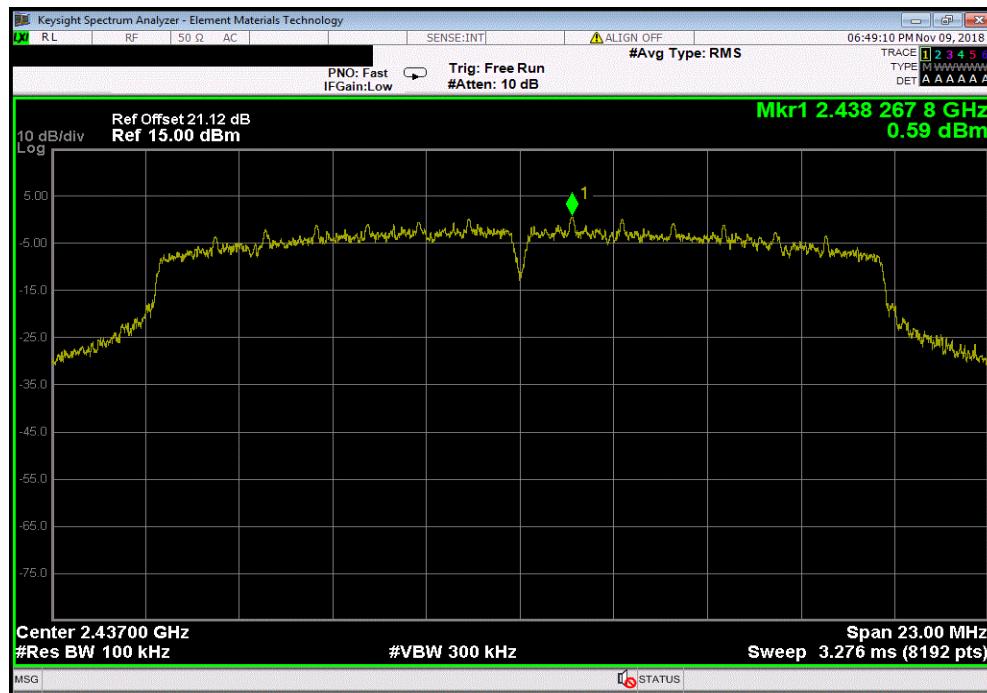


TbTx 2018.09.13 XM1 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS4, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|--|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| 12.5 GHz - 25 GHz | 24995.42 | -51.41 | -30 | Pass | |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | | | |
|--|---------------------|-----------------|---------------|--------|-----|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result | |
| Fundamental | 2438.27 | N/A | N/A | N/A | N/A |

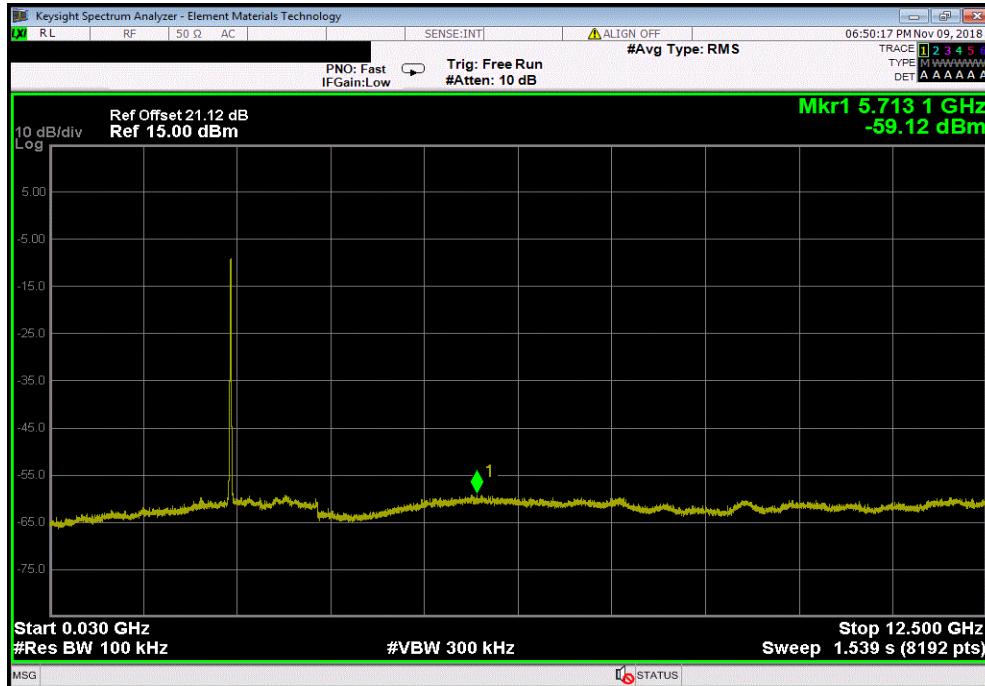


SPURIOUS CONDUCTED EMISSIONS



TbTx 2018.09.13 XMI 2017.12.13

| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | | |
|--|---------------------|-----------------|---------------|--------|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result |
| 30 MHz - 12.5 GHz | 5713.13 | -59.71 | -30 | Pass |



| 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Single Channel 6, 2437 MHz | | | | |
|--|---------------------|-----------------|---------------|--------|
| Frequency Range | Measured Freq (MHz) | Max Value (dBc) | Limit ≤ (dBc) | Result |
| 12.5 GHz - 25 GHz | 24835.19 | -48.84 | -30 | Pass |

