Test Report



Bureau Veritas Consumer Products Services, Inc.

| Report No | ER2107-2 lssue 2 |
|--|--|
| Client | Onset Computer Corporation Jim Corrigan |
| Address | 470 MacArthur Blvd. Bourne, MA 02532 |
| Phone | (508) 743-3195 |
| Items tested FCC ID IC ID FRN | MX2201/2 WXF-ONST4 7936A-ONST4 0009380064 |
| Equipment Type Equipment Code | Digital Transmission System DTS |
| FCC/IC Rule Parts | CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2 |
| Test Dates | July 12 to 19, 2017 |
| Results | As detailed within this report |
| Prepared by | Tuyen Truong – Test Engineer |
| Authorized by | Anna Vancheva - EMC Engineer |
| Issue Date | 8/10/2020 |
| Conditions of Issue | This Test Report is issued subject to the conditions stated in the ' <i>Conditions of Testing</i> ' section on page 36 of this report. |

Bureau Veritas Consumer Products Services, Inc. is accredited by the American Association for Laboratory Accreditation for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation.



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Form Final Report REV 12-07-15



Summary

This test report supports an application for certification of a transmitter operating pursuant to: CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2.

"MX2201/2" is a Bluetooth Low Energy transmitter operating in the 2402 MHz to 2480 MHz frequency range.

Antenna Type:Internal surface mount chipGain:1.3dBi

We found that the product met the above requirements without modification.

Test samples were received in good condition.

Data tables may contain Curtis-Straus LLC.

Curtis-Straus LLC. a wholly owned subsidiary of Bureau Veritas was merged into its parent company in 2019.

| lssue No. | Reason for change | Date Issued |
|-----------|-----------------------------|-------------|
| 1 | Original release | 7/29/2020 |
| 2 | Updating Standard revisions | 8/10/2020 |



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Test Methodology

All testing was performed according to the following rules/procedures/documents; CFR 47 FCC Part 15.247, RSS-247 Issue 2, RSS-Gen Issue 5, FCC KDB 558074 D01 DTS Measurement Guidance v05r02 and ANSI C63.10-2013.

Radiated emissions were maximized by rotating the device around 3 orthogonal planes (X, Y and Z) as well as varying the test antenna's height and polarity. The device antenna could not be maximized separately.

RF measurements were performed at the antenna port. 3 channels were tested as follows:

- Low Channel 2402MHz
- Mid Channel 2440MHz
- High Channel 2480MHz

EUT operating voltage is 3VDC from battery.

The following bandwidths were used during radiated spurious emissions testing.

| Frequency | RBW | VBW |
|------------|--------|-------|
| 0.15-30MHz | 9kHz | 30kHz |
| 30-1000MHz | 120kHz | 1MHz |
| 1-25GHz | 1MHz | 3MHz |





Product Tested - Configuration Documentation

| | | | | | EUT C | onfiguration | | | | | | |
|-----------------------|--------|-------------|---------------------|------------------|-----------------|-----------------|----------|-----------|--------------|---------------|-----------------------|--|
| Work O | rder: | R2107 | | | | | | | | | | |
| Com | pany: | Onset (| Computer Co | orporation | | | | | | | | |
| Company Add | lress: | 470 Ma | 470 MacArthur Blvd. | | | | | | | | | |
| | | Bourne | Bourne, MA, 02532 | | | | | | | | | |
| | | | | | | | | | | | | |
| Cor | ntact: | Jim Co | rrigan | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | MN | | | PN | | | SN | | |
| | EUT: | | M | X2201/2 | | | | | Sample 1 (Co | nducted at | antenna port testing) | |
| | | | M | X2201/2 | | | | | Sam | ole 2 (Radia | ated testing) | |
| EUT Descrip | otion: | Wirele | ss Transmitt | er | | | | | | | | |
| EUT Tx Frequ | ency: | 2402-2 | 480 MHz | | | | | | | | | |
| | | | | | | | | | | | | |
| Support Equipment | | | | M | N | | | | SN | | | |
| Laptop | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Port Label | Port | t Type | # ports | # populated | cable type | shielded | ferrites | length (n | 1) in/out | under test | comment | |
| sense | other | | 0 | 0 | other | Yes | No | | in | no | Setup Only | |
| | | | | | | | | | | | | |
| Software Operating M | | | | | | | | | | | | |
| Firmware Version 0.34 | . EUT | is set to t | ransmit on O | Channel 2402, 24 | 440 and 2480 MF | Iz respectively | | | | | | |





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Statement of Conformity

The EUT has been found to conform to the following parts of FCC 15.247 and RSS 247 as detailed below:

| RSS-GEN | RSP-100 | RSS 247 | Part 15 | Comments |
|---------|---------|---------|------------------|--|
| 6.4 | | | 15.15(b) | There are no controls accessible to the user that |
| | | | | varies the output power to operate in violation of the |
| | | | | regulatory requirements. |
| | 5 | | 15.19 | The label is shown in the label exhibit. |
| | 7 | | 15.21 | Information to the user is shown in the instruction manual exhibit. |
| | | | 15.27 | No special accessories are required for compliance. |
| 3.2 | | | 15.31 | The EUT was tested in accordance with the measurement standards in this section. |
| 6.13.2 | | | 15.33 | Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates. |
| 6.13.1 | | | 15.35 | The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates. |
| 6.8 | | | 15.203 | The antenna for this device is a permanently installed PCB antenna with a 1.3dBi gain. |
| 8.10 | | | 15.205 15.209 | The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable |
| 8.8 | | | 15.207 | Not applicable since the EUT operating voltage is 3VDC from battery. |
| | | | 15.247 | The unit complies with the requirements of 15.247 |
| | | RSS 247 | | The unit complies with the requirements of RSS-247 |
| 6.7 | | | | Occupied Bandwidth measurements were made. |

Modifications Required for Compliance

No modifications required for compliance





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Test Results

Bandwidth

Limit: The minimum 6 dB *bandwidth shall be at least 500 kHz.* [15.247(a) (2)]

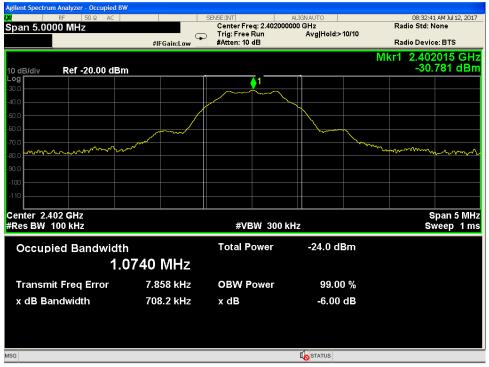
MEASUREMENTS/RESULTS

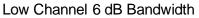
| | | | 6dB Band | width | | | | | |
|--|---------------|------------------------------|---------------------------|----------------------|-------------------------|----------------------|-----------|------------------------------|----------------------------|
| Date: 8/10/2020 | Compan | y: Onset | | | | | | Work Order: | R2107 |
| Engineer: Zac Johnson | EU | T: MX2201/2 | | | Op | perating | Volta | age/Frequency: | 3V Battery |
| Temp: 23.7°C | Humidit | y: 52% | Pressure: | 1007mBar | | | | | |
| Frequency Range: 2 | 2402-2480 MHz | Mea | surement Type: | Conducted | | | | | |
| | | Measu | rement Method: | FCC KDB 55 | 58074 D01 E | DTS Mea | as Gui | dance V05r02 | |
| Notes: | | | | | | | | | |
| | | | | | | | | 6dB Bandwi | dth |
| Frequency | | | Reading | | | | Limit | Margin | Result |
| (MHz) | | | (kHz) | | | | (kHz) | (kHz) | (Pass/Fail) |
| 2402 | | | 708.2 | | | | ≥500 | 208 | Pass |
| 2440 | | | 707.8 | | | | ≥500 | 208 | Pass |
| 2480 | | | 712.5 | | | | ≥500 | 213 | Pass |
| Test Site: EMC-5 | Cabl | e: 2288 cbl | | Atten | uator: 2121 | Pad | | | |
| Analyzer: 1118470 SA | | | | | | | | Copyright Curtis- | Straus LLC 2000 |
| Rev. 7/26/2017 | | | | | | | | | |
| Spectrum Analyzers / Receiver Rental EXA Signal Analyze | | Range 9KHz-26.5GHz | MN N9010A-526;K | Mfr AT | SN MY51170010 | Asset 1118472 | Cat I | Calibration Due 7/25/2018 | Calibrated on 7/25/2017 |
| Preamps /Couplers Attenua API - 30dB 20W Atter | | Range 9KHz-40GHz | MN 89-30-11 | Mfr API Weinschel | SN 703 | Asset 2121 | Cat I | Calibration Due 3/22/2018 | Calibrated on 3/22/2217 |
| Cables Asset #2288 | | Range 9KHz-26.5GHz | FLC-1.5FT-SMSM+ | Mfr Mini-Circuits | 16021029 | | Cat II | Calibration Due 1/27/2018 | Calibrated on 1/27/2017 |

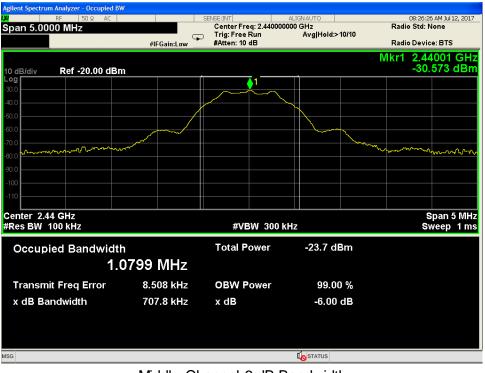
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.







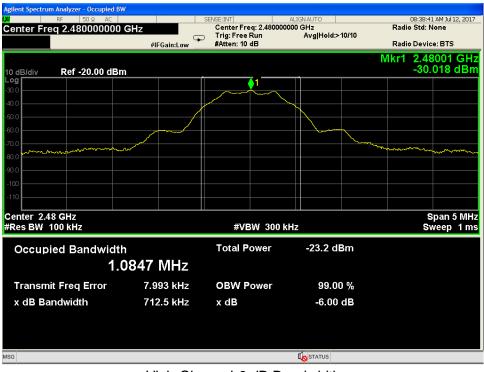




Middle Channel 6 dB Bandwidth







High Channel 6 dB Bandwidth





Peak Output Power

LIMIT: 1 Watt Conducted Output Power [15.247(b) (3)]

MEASUREMENTS/RESULTS

Cables

Asset #2288

| Date: 7/12/2017 | Cor | mpany: Onset Compu | uter Corporation | | | | | Work Orde | r: R2107 |
|--|--|-----------------------|---------------------|-----------------|-------------------------|-------------------------|---------|------------------------------|-------------------------|
| ngineer: Zac Johns | on | EUT: MX2201/2 | | | | Opera | ating \ | /oltage/Frequenc | y: 3V Battery |
| Temp: 23.7°C | | midity: 52% | | Pressure: 1007 | mBar | | | | |
| Frequency Range: | 2402-2480 MHz | | Measuren | nent Type: Cond | lucted | | | | |
| Notes: | | | | | | | | | |
| Frequency | Peak Reading | Cable Loss | Attenuator Loss | Peak Output Po | wer | Limit | | Margin | Result |
| (MHz) | (dBm) | (dB) | (dB) | (dBm) | | (dBm) | | (dB) | (Pass/Fai |
| 2402 | -30.75 | 0.32 | 30.00 | -0.43 | | 30.0 | | -30.43 | Pass |
| 2440 | -30.25 | 0.32 | 30.00 | 0.07 | | 30.0 | | -29.93 | Pass |
| 2480 | -30.10 | 0.32 | 30.00 | 0.22 | | 30.0 | | -29.78 | Pass |
| est Site: EMC-5 | | Cable: 2288 cbl | | | Attenua | tor: 2121 | Pad | | |
| | A | | | | | | | | |
| nalyzer: 1118470 S | ma) Deel Deeding (dDm) | | | | | | | | |
| | Bm)= Peak Reading (dBm) |) + Cable Loss (dB) + | Attenuator Loss (di | 2, | | | | | |
| k Output Power (dE | | | | | | | | | |
| ak Output Power (dE 7/26/2017 Spectrum Analyze | Bm)= Peak Reading (dBm) ars / Receivers /Preselector ignal Analyzer(1118472) | | MN | Mfr | SN MY51170010 | Asset 1118472 | Cat | Calibration Due 7/25/2018 | Calibrated 7/25/2017 |

9KHz-26.5GHz FLC-1.5FT-SMSM+ Mini-Circuits 16021029

Mfr

Cat

Ш

Calibration Due

1/27/2018

Calibrated on

1/27/2017

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Range

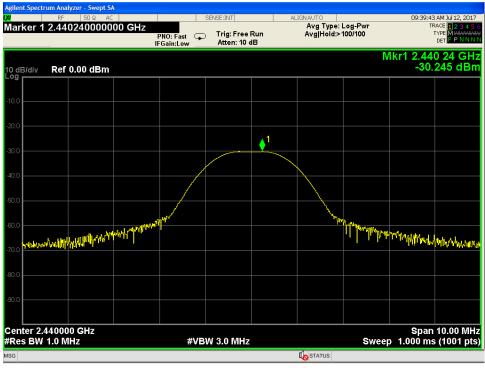




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Low Channel Peak Output Power



Middle Channel Peak Output Power





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High Channel Peak Output Power





Radiated Spurious Emissions

Limits: Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). [15.247(d)]

MEASUREMENTS/RESULTS

Radiated Band Edge

| Date: | 18-Jul-17 | | | Company: | Onset Com | puter Co | orporation | | | | | v | Vork Order | : R2107 |
|--|---|--|--|-----------|---|---------------------------------------|--|---------------------------------------|--|--|---|---|---|-----------------------------|
| Engineer: | Zac Johnson | | | EUT Desc: | MX2201/2 | | | | | E | UT Oper | ating Voltage/ | Frequency | : 3V DC |
| Temp: | 25.2°C | | | Humidity: | 25% | | | Pressure: | 48% | | | | | Battery |
| | | Freque | ncy Range: | 2310-2500 | MHz | | | | | N | leasurem | nent Distance: | 3 m | |
| Notes | | | | | | | | | | | E | UT Max Freq: | 2480MHz | |
| Antenna | | Peak | Average | Preamp | mp Antenna Cable Adjusted Adj | | Adjusted | FCC Class B | Class B High Frequency - Peak | | FCC Clas | s B High F Average | | |
| Polarization | Frequency | Reading | Reading | Factor | Factor | Factor | Peak Readin | 5 5 5 5 | | Margin | Result | Limit | Margin | Result |
| (H / V) | (MHz) | (dBµV) | (dBµV) | (dB) | (dB/m) | (dB) | (dBµV/m) | (dBµV/m) | (dBµV/m) | (dB) | (Pass/Fail) | | (dB) | (Pass/Fa |
| н н | 2373.0 2390.0 | 21.4 18.2 | 1.4 -1.8 | 0.0 | 32.1 32.2 | 3.4 3.4 | 56.9 53.8 | 36.9 33.8 | 74.0 74.0 | -17.1 -20.2 | Pass Pass | 54.0 54.0 | -17.1 -20.2 | Pass Pass |
| н | 2390.0 | 16.2 | -1.6 | 0.0 | 32.2 | 3.4 | 53.6 | 33.4 | 74.0 | -20.2 | Pass | 54.0 54.0 | -20.2 | Pass |
| н | 2489.9 | 20.8 | 0.8 | 0.0 | 32.4 | 3.5 | 56.7 | 36.7 | 74.0 | -17.3 | Pass | 54.0 | -17.3 | Pass |
| Tabl | e Result: | | Pass | by | -17.1 | dB | | | | | V | Norst Freq: | 2373.0 |) MHz |
| Analyzer: Ssoft Radiate | EMI Chamber 1170725 SA ed Emissions C | Calculator | v 1.017.188 | Preamp: | | | | | | Cable 2: Antenna: E | | | Cable 3 Preselector Copyright Cur | : |
| Analyzer: Ssoft Radiate djusted Read | EMI Chamber 1170725 SA Ed Emissions C ling = Reading | Calculator | v 1.017.188 | Preamp: | none | | | | | | | | reselector | |
| Analyzer: Ssoft Radiate djusted Read | EMI Chamber 1170725 SA Ed Emissions C ling = Reading | Calculator - Preamp Fa | v 1.017.188 Ictor + Anten | Preamp: | none | or | MN | Mfr | SN | | Blue Horn | | Preselector Copyright Cur | : |
| Analyzer: Ssoft Radiate djusted Read ev. 7/26/201 Spectr | EMI Chamber 1170725 SA ed Emissions C ling = Reading | Calculator - Preamp Fa | v 1.017.188 actor + Anten | Preamp: | none - Cable Fact | ge | MN N9038A | Mfr Agilent | | Antenna: E Asset | Blue Horn | F | Preselector Copyright Cur | : tis-Straus LLC |
| Analyzer: Ssoft Radiate djusted Read ev. 7/26/201 Spectr | EMI Chamber 1170725 SA ed Emissions C ting = Reading 7 um Analyzer Rental MXE E Radiated | Calculator - Preamp Fa | v 1.017.188 actor + Anten ers /Presele r(1170725) s Sites | Preamp: | none - Cable Fact Rang | ge .5GHz :ode | | | SN | Antenna: E Asset | Blue Horn Cat | F Calibration D | Preselector Copyright Cur Due Ca 1 Due Ca | i librated 12/22/2016 |
| Analyzer: Ssoft Radiate djusted Read ev. 7/26/201 Spectr | EMI Chamber 1170725 SA ad Emissions C ding = Reading 17 um Analyzer Rental MXE E Radiated EMI | Calculator - Preamp Fa s / Receive MI Receive Emissions | v 1.017.188 actor + Anten ers /Presele r(1170725) s Sites | Preamp: | Rang 20Hz-26. | or ge .5GHz Sode 50 ge | N9038A | Agilent | SN MY51210151 Range | Antenna: E Asset 1170725 Asset | Cat I Cat | Calibration D 12/22/2017 Calibration D | Preselector Copyright Cur Due Ca 1 Due Ca 1 Due Ca | : tis-Straus LLC |
| Analyzer: Ssoft Radiate djusted Read ev. 7/26/201 Spectr | EMI Chamber 1170725 SA ad Emissions C ding = Reading I7 um Analyzer Rental MXE E Radiated EMI A B Meteorc Weather Clo | s / Receive MI Receive Emissions Chamber 2 Intennas Iue Horn ological Me | v 1.017.188 ictor + Anten ers /Presele r(1170725) s Sites 2 | Preamp: | Rang 20Hz-26. FCC C 7191 Rang | or ge .5GHz Sode 50 ge | N9038A IC Code 2762A-7 MN 3117 MN | Agilent VCCI Code A-0015 Mfr | SN MY51210151 Range 1-18GHz SN | Antenna: E Asset 1170725 Asset 1686 Asset | Cat I Cat I Cat I Cat | Calibration D 12/22/2017 Calibration D 12/21/2018 Calibration D | reselector Copyright Cur Due Ca 1 Due Ca 1 Due Ca Due Ca | tis-Straus LLC |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.





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Radiated Spurious 30 to 25 GHz

| urtis Straus | - a Bureau V | eritas Company | Ý | | | Work Orde | er - R2107 | | | |
|---|---|--|-------------------------|---|--|--|--|------------|--------|--|
| adiated Emi | issions Elect | ric Field 3m Dis | tance | | | EUT Powe | r Input - 3VDC Batte | ery | | |
| 0-1000MHz I | Horizontal T | abular Data | | | | Test Site - | Chamber#2 | | | |
|) perator: Nir | rak So | | | | | Temp; Hui | mid; Pres - 26°C; 50 |)%RH; 1005 | mBar | |
| | | | | | | Witnessed by - Joe Cabral | | | | |
| lote: All 3 or | rientations o | of EUT were invo | estigated; only | | | EUT Maximum Frequency - 2480 MHz | | | | |
| he worst cas | | | 0 / / | | | Req. 1; Req. 2 - FCC Class B | | | | |
| | | | | | | Test | • | | Worst | |
| | Raw QP | Correction | Adjusted QP | Limit Req | Margin | Results | | EUT | Margin | |
| Frequency | Reading | Factor | Amplitude | 1 | Reg 1 | Reg 1 | Antenna Height | Azimuth | Reg 1 | |
| | Ŭ | | · | | | | | | | |
| MHz | dBµV | dB/m | dBµV/m | dbµV/m | dB | Pass/Fail | centimeters | degrees | dB | |
| 30.006 | 27.4 | -14.7 | 12.6 | 40 | -27.4 | PASS | 125 | 309 | | |
| 466.365 | 42.6 | -16.7 | 25.9 | 46 | -20.2 | PASS | 146 | 205 | -20.2 | |
| 613.567 | 32.5 | -14.3 | 18.2 | 46 | -27.8 | PASS | 254 | 160 | | |
| 750.061 | 31.2 | -11.7 | 19.5 | 46 | -26.5 | PASS | 147 | 243 | | |
| 875.102 | 31.2 | -9.6 | 21.7 | 46 | -24.4 | PASS | 175 | 196 | | |
| 883.653 | 32.8 | -9.3 | 23.5 | 46 | -22.5 | PASS | 246 | 20 | | |
| Radiated Emis | us, a Bureau Veritas ssions, Electric Field, 3m ertical Antenna Polarity | | | | n Data, 120kHz RBW k Data, 120kHz BW luirement 1 | , 300K12 VBW 1 1 | Vork Order - R2107 EUT Power Input - 3VDC Battery fest Site - Chamber#2 remp; Humid; Pres - 26°C; 50%RH; 100 Vinnesed br Jec Cabral | 15m Bar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac | ssions, Electric Field, 3m ertical Antenna Polarity | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | \ Quasi-pea | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 |)5mBar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | 95m Bar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | SmBar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | SmBar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | SmBar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | SmBar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | SmBar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | SmBar | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | UT Power Input - 3VDC Battery Test Site - Chamber#2 Temp: Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral UT Maximum Frequency - 2480 MHz leq. 1; Req. 2 - FCC Class B | | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | UT Power Input - 3VDC Battery Test Site - Chamber#2 Temp: Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral UT Maximum Frequency - 2480 MHz leq. 1; Req. 2 - FCC Class B | | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | EUT Power Input - 3VDC Battery Test Site - Chamber#2 Temp; Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral EUT Maximum Frequency - 2480 MHz | | | |
| Radiated Emis 30-1000MHz Ve Correction Fac Adjusted Read | ssions, Electric Field, 3m ertical Antenna Polarity ctor = Antenna + RF Cat | n Test Distance Dies + Filter + Preselector + Att | enuator - Preamplifier. | ▽ Quasi-pea — Limit, Req — Limit, Req | k Data, 120kHz BW uirement 1 uirement 2 | E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | UT Power Input - 3VDC Battery Test Site - Chamber#2 Temp: Humid; Pres - 26°C; 50%RH; 100 Vitnessed by - Joe Cabral UT Maximum Frequency - 2480 MHz leq. 1; Req. 2 - FCC Class B | | | |

Current Time -06:53:54 PM, Thursday, July 13, 2017





| | | Veritas Compa tric Field 3m D | | | | Work Orde | er - R2107 r Input - 3VDC Batte | erv | | | |
|---|--|---|------------------------------|--|---|--|--|---------|--------|--|--|
| 30-1000MHz \ | | | istance | | | | Chamber#2 | - ' ' | | | |
| Operator: Nir | | | | | | Temp; Humid; Pres - 26°C; 50%RH; 1005mBar | | | | | |
| operator in | | | | | | Witnessed by - Joe Cabral | | | | | |
| Note: All 3 or | rientations | of FUT were in | vestigated; only | | | EUT Maximum Frequency - 2480 MHz | | | | | |
| he worst cas | | | i congatea, oni, | | | | q. 2 - FCC Class B | | | | |
| | | | | | | Test | | | Worst | | |
| | Raw QP | Correction | Adjusted QP | | Margin | Results | | EUT | Margin | | |
| Frequency | Reading | Factor | Amplitude | Limit Req 1 | Req 1 | Req 1 | Antenna Height | Azimuth | Req 1 | | |
| | | | | | | | _ | | | | |
| MHz | dBµV | dB/m | dBµV/m | dBµV/m | dB | Pass/Fail | centimeters | degrees | dB | | |
| 30.076 | 27.2 | -14.8 | 12.4 | 40 | -27.6 | PASS | 105 | 303 | | | |
| 196.382 | 39.9 | -22.8 | 17 | 43.5 | -26.5 | PASS | 105 | 290 | | | |
| 466.325 | 36.4 | -16.7 | 19.7 | 46 | -26.3 | PASS | 225 | 35 | | | |
| 490.894 | 36.8 | -16.3 | 20.6 | 46 | -25.5 | PASS | 197 | 99 | | | |
| 770.497 | 26.8 | -11.4 | 15.4 | 46 | -30.6 | PASS | 209 | 295 | | | |
| | | | | | | | 100 | 205 | -22.8 | | |
| 875.092 | 32.8 us, a Bureau Verit | -9.6 as Company | 23.2 | Peak Scan D | -22.8 | | 160 | 205 | -22.0 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa | us, a Bureau Verit; issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | + Attenuator - Preamplifier. | — Peak Scan D | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | | | -22.8 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa | us, a Bureau Verit issions, Electric Field, łorizontal Antenna Po | as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.8 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.8 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.8 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.0 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.0 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.0 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.0 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa Adjusted Reau | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | -22.0 | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa Adjusted Reau | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 000kHz VBW W EU Te Te Wi EU | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | | | |
| 875.092 Curtis-Stran Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 900kHz VBW W EL Te Te Wi EL | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | | | |
| 875.092 Curtis-Strau Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 900kHz VBW W EL Te Te Wi EL | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | | | | |
| 875.092 Curtis-Stran Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 900kHz VBW W EL Te Te Wi EL | yrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamber#2 mp: Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral T Maximum Frequency - 2480 MHz q. 1; Req. 2 - FCC Class B | SmBar | | | |
| 875.092 Curtis-Strat Radiated Emi 30-1000MHz H Correction Fa Adjusted Rea | us, a Bureau Verit: issions, Electric Field, forizontal Antenna Po actor = Antenna + RF (| as Company 3m Test Distance Iarity Cables + Filter + Preselector | | ── Peak Scan D ▽ Quasi-peak I ── Limit, Requi ── Limit, Requi | bata, 120kHz RBW, 3 Data, 120 kHz BW rement 1 rement 2 | 900kHz VBW W EL Te Te Wi EL | rrk Order - R2107 T Power Input - 3VDC Battery st Site - Chamborf2 mp; Humid; Pres - 26°C; 50%RH; 100 messed by - Joe Cabral Maximum Frequency - 2480 MHz | SmBar | | | |



0 L 30M

Operator: Nirak So

Tile Version: 7.2.6.12, Profile Version 07-07-2017.

Current Time -07:05:24 PM, Thursday, July 13, 2017

Frequency (Hz)

100M

Mid Channel 2440MHz in X Orientation.



| Rev | 7/3/2017 | |
|-----|----------|--|

| Rev. 7/3/2017 | | | | | | | | |
|---|--------------|---------|-------------------|------------|---------|-----|-----------------|---------------|
| Spectrum Analyzers / Receivers / Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Rental MXE EMI Receiver(1170725) | 20Hz-26.5GHz | N9038A | Agilent | MY51210151 | 1170725 | Т | 12/22/2017 | 12/22/2016 |
| Radiated Emissions Sites | FCC Code | IC Code | VCCI Code | Range | Asset | Cat | Calibration Due | Calibrated on |
| EMI Chamber 2 | 719150 | 2762A-7 | A-0015 | 30-1000MHz | 1686 | I | 12/21/2018 | 12/21/2016 |
| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| 2310 PA | 1-1000MHz | PAM-103 | COM-POWER | 441174 | 2310 | Ш | 2/4/2018 | 2/4/2017 |
| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Red-White Bilog | 30-2000MHz | JB1 | Sunol | A091604-1 | 1105 | I | 8/12/2017 | 8/12/2015 |
| Meteorological Meters | | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | I. | 4/28/2018 | 4/28/2016 |
| TH A#2078 | | HTC-1 | HDE | | 2078 | Ш | 3/23/2018 | 3/23/2017 |
| Cables | Range | | Mfr | | | Cat | Calibration Due | Calibrated on |
| Asset #1522 | 9kHz - 18GHz | | Florida RF | | | Ш | 2/11/2018 | 2/11/2017 |
| Asset #2052 | 9kHz - 18GHz | | Florida RF | | | Ш | 3/5/2018 | 3/5/2017 |
| Asset #2053 | 9kHz - 18GHz | | Florida RF | | | Ш | 10/30/3017 | 10/30/2016 |
| | | | | | | | | |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Radiated Emissions Table Date: 18-Jul-17 Company: Onset Computer Corporation Work Order: R2107 Engineer: Zac Johnson EUT Desc: MX2201/2 EUT Operating Voltage/Frequency: 3V DC Temp: 24.8°C Humidity: 48% Pressure: 1012mBar Battery Frequency Range: 1-6GHz Measurement Distance: 3 m Notes: No Emissions Found, EUT Max Freq: 2480MHz FCC Class B High Frequency -FCC Class B High Frequency -Antenna Peak Average Preamp Antenna Cable Adjusted Adjusted Peak Average Polarization Frequency Reading Reading Factor Factor Factor Peak Reading Avg Reading Limit Margin Result Limit Margin Result (H/V) (dBµV) (dBµV) (dB) (dB/m) (dBµV/m) (dBµV/m) (MHz) (dB) dBµV/m (dB) (Pass/Fail) (dBµV/m (dB) (Pass/Fail) No Emissions Found Table Result: Pass ---- dB --- MHz by Worst Freq: Test Site: EMI Chamber 2 Cable 1: Asset #20 Cable 2: Asset #2053 Cable 3: Analyzer: 1170725 SA Preamp: none CSsoft Radiated Emissions Calculator v 1.017.188 Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Facto Antenna: Blue Horn Preselector: ---Copyright Curtis-Straus LLC 2

| Date: | 18-Jul-17 | | | Company: | Onset Con | nputer Co | rporation | | | | | ١ | Nork Order: | R2107 |
|-------------------------|----------------------------|-------------------|-------------------|---------------------|-------------------|----------------|--------------------------|-------------------------|-------------------|----------------------|--------------------------|-------------------|--------------------------|----------------------|
| Engineer: | Zac Johnson | | | EUT Desc: | MX2201/2 | | | | | | EUT Operat | ing Voltage | Frequency: | 3V DC |
| Temp: | 24.8°C | | | Humidity: | 48% | | | Pressure: | 1012mBar | | | | | Battery |
| | | Freque | ncy Range: | 6-18GHz | | | | | | | Measureme | nt Distance: | 1 m | |
| Notes: | | | | | | | | | | | EU. | Г Max Freq: | 2480MHz | |
| Antenna | | Peak | Average | Preamp | Antenna | Cable | Adjusted | Adjusted | FCC Clas | s B High Fre Peak | equency - | FCC Cla | ss B High Fr Average | equency - |
| Polarization (H / V) | Frequency (MHz) | Reading (dBµV) | Reading (dBµV) | Factor (dB) | Factor (dB/m) | Factor (dB) | Peak Reading (dBµV/m) | Avg Reading (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail |
| Mid Channel | | | | | | | | | | | | | | |
| н | 7320.0 | 26.6 | 6.6 | 0.0 | 36.2 | 6.2 | 69.0 | 49.0 | 83.5 | -14.5 | Pass | 63.5 | -14.5 | Pass |
| ow Channel | | | | | | | | | | | | | | |
| H | 7205.0 | 23.8 | 3.8 | 0.0 | 36.1 | 6.2 | 66.1 | 46.1 | 83.5 | -17.4 | Pass | 63.5 | -17.4 | Pass |
| | | | | | | | | | | | | | | |
| ligh Channel | | | | | | | | | | | | | | |
| н | 7440.0 | 27.6 | 7.6 | 0.0 | 36.2 | 6.1 | 69.9 | 49.9 | 83.5 | -13.6 | Pass | 63.5 | -13.6 | Pass |
| Table | e Result: | | Pass | by | -13.6 | dB | • | | | | W | orst Freq: | 7440.0 | MHz |
| | EMI Chamber Rental SA#2 | 2 | | Cable 1: Preamp: | Asset #20 none | 52 | | | | | Asset #2053 Blue Horn | | Cable 3: Preselector: | |





Rev. 7/26/2017

| Rev. 7/26/2017 | | | | | | | | |
|--|-----------------------|---------------------|-----------------------|-------------------------|------------------|----------|-------------------------------|-----------------------------|
| Spectrum Analyzers / Receivers /Preselectors Rental MXE EMI Receiver(1170725) | Range 20Hz-26.5GHz | MN N9038A | Mfr Agilent | SN MY51210151 | Asset 1170725 | Cat I | Calibration Due 12/22/2017 | Calibrated on 12/22/2016 |
| Radiated Emissions Sites | FCC Code | IC Code | VCCI Code | Range | Asset | Cat | Calibration Due | Calibrated on |
| EMI Chamber 2 | 719150 | 2762A-7 | A-0015 | 1-18GHz | 1686 | Т | 12/21/2018 | 12/21/2016 |
| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Blue Hom | 1-18Ghz | 3117 | ETS | 157647 | 1861 | I | 2/14/2019 | 2/14/2017 |
| Meteorological Meters | | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | 1 | 4/28/2018 | 4/28/2016 |
| TH A#2081 | | HTC-1 | HDE | | 2081 | Ш | 3/23/2018 | 3/23/2017 |
| Cables | Range | | Mfr | | | Cat | Calibration Due | Calibrated on |
| Asset #2052 | 9kHz - 18GHz | | Florida RF | | | Ш | 3/5/2018 | 3/5/2017 |
| Asset #2053 | 9kHz - 18GHz | | Florida RF | | | Ш | 10/30/3017 | 10/30/2016 |
| | | | | | | | | |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

| | 18-Jul-17 | | | Company: | Onset Con | nputer Cor | poration | | | | | | W | ork Order: | R2107 |
|---------------|------------|-------------|-----------|--------------|-------------|------------|--------------|----------|----------------|----------|----------|-------------|-----------|-------------------|-------------|
| ngineer: Z | | n | | EUT Desc: | | | | | | | EUT | Operating | Voltage/F | requency: | |
| Temp: 2 | 24.8°C | | | Humidity: | 48% | | | Pressure | : 1012mBar | | | | | | Battery |
| | | Frequen | cy Range: | 18-25GHz | | | | | | | Me | asurement | Distance: | 0.1 m | |
| Notes: N | No Emissio | ons Found | | | | | | | | | | EUT | Max Freq: | 2480MHz | |
| Antenna | | Peak | | Preamp | Antenna | Cable | Adjusted | Adjusted | Adjusted | | | | FCC Clas | s B High F | requency |
| olarization F | Frequency | Reading | Reading | Factor | Factor | Factor | Peak Reading | Reading | Reading (EIRP) | Limit | Margin | Result | Limit | Margin | Result |
| (H/V) | (MHz) | (dBµV) | (dBµV) | (dB) | (dB/m) | (dB) | (dBµV/m) | (dBµV/m) | (dBm) | (dBµV/m) | (dB) | (Pass/Fail) | (dBm) | (dB) | (Pass/Fail |
| 1 | No Emissio | ons Found | | | | | | | | | | | -30.0 | | Pass |
| able R | esult: | | Pass | by | | dB | | | | | | Wo | rst Freq: | | MHz |
| est Site: (| Chamber 2 | | | Cable 1: | 2286 cbl | | | | | | Cable 2: | | | Cable 3: | |
| nalyzer: (| | | | Preamp: | | | | | | | | | | reselector: | |
| | | sions Calc | ulator v | 1.017.179 | WILLE | | | | | | Antenna. | 10-20.001 | | ovright Curtis-St | |
| | | | | | Easter I | Coblo Eoc | stor | | | | | | Cop | byright Curtis-St | aus LLC 200 |
| ajusted Re | aung = R | eauing - Pr | eamp Fact | tor + Antenr | la Factor + | Cable Fac | | | | | | | | | |

| Spectrum Analyzers / Receivers /Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on 2/28/2017 |
|---|---------------------------|-----------------------|--|----------------------|----------------------|-----------|---|---|
| Gold | 100Hz-26.5 GHz | E4407B | Agilent | MY45113816 | 1284 | I | 2/28/2018 | |
| Radiated Emissions Sites EMI Chamber 2 | FCC Code 719150 | IC Code 2762A-7 | VCCI Code A-0015 | Range 1-18GHz | Asset 1686 | Cat | Calibration Due 12/21/2018 | Calibrated on 12/21/2016 |
| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| HF (Yellow) | 18-26.5GHz | AFS4-18002650-60-8P-4 | CS | 467559 | 1266 | II | 9/16/2017 | 9/16/2016 |
| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on date of test |
| HF (White) Horn | 18-26.5GHz | 801-WLM | Waveline | 758 | 758 | Ⅲ | Verify before Use | |
| Meteorological Meters Weather Clock (Pressure Only) TH A#2081 | | MN BA928 HTC-1 | Mfr Oregon Scientific HDE | SN C3166-1 | Asset 831 2081 | Cat I | Calibration Due 4/28/2018 3/23/2018 | Calibrated on 4/28/2016 3/23/2017 |
| Cables Asset #2285 | Range 9KHz-2GHz | RG214/U | Mfr Pasternack | | | Cat II | Calibration Due 1/27/2018 | Calibrated on 1/27/2017 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

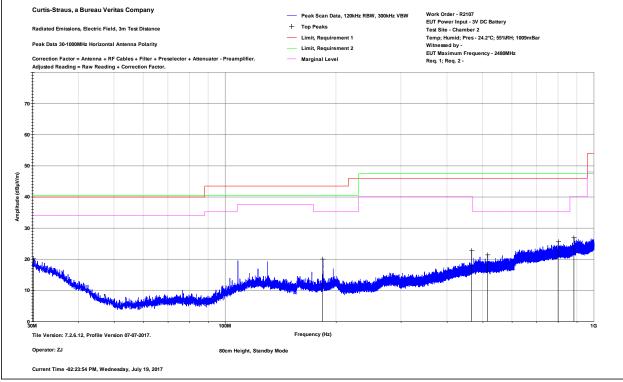




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Standby Mode

| Curtis Stra | us - a Bure | au Veritas | Company | | | | | | Work Ord | er - R2107 | | | |
|-------------|----------------|-----------------|------------------|--------|--------|-----------|--------------------|------------------|-------------|-------------------------------------|-------------|------------|--------|
| Radiated E | Emissions | Electric Fie | ld 3m Dista | ance | | | | | EUT Powe | r Input - 3\ | / DC Batter | у | |
| Top Peaks | Horizonta | I 30-1000N | 1Hz | | | | | | Test Site - | Chamber | 2 | | |
| Operator: | ZJ | | | | | | | | Temp; Hu | mid; Pres - | 24.2°C; 559 | %RH; 1009i | mBar |
| Standby N | Лode | | | | | | | | | | | | |
| 80cm Heig | ht | | | | | | | | EUT Maxir | num Frequ | iency - 248 | OMHz | |
| | | | Adjusted Peak | | | Req 1 | | | Req 2 | | | Worst | Worst |
| Frequenc | Peak | Correctio | Amplitud | Req 1 | Req 1 | Test | Req 2 | Req 2 | Test | Antenna | EUT | Margin | Margin |
| У | Reading | n Factor | е | Limit | Margin | Results | Limit | Margin | Results | Height | Azimuth | Req 1 | Req 2 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | centimet | | | |
| MHz | dBµV | dB/m | dBµV/m | dBµV/m | dB | Pass/Fail | dBµV/m | dB | Pass/Fail | ers | degrees | dB | dB |
| 30.218 | 24 | -3.9 | 20.1 | 40 | -19.9 | PASS | 40.5 | -179.9 | PASS | 200 | 45 | | |
| 184.109 | 33.2 | -13.2 | 20 | 43.5 | -23.5 | PASS | 40.5 | -180 | PASS | 150 | 180 | | |
| 466.403 | 29.6 | -6.9 | 22.8 | 46 | -23.2 | PASS | 47.5 | -177.2 | PASS | 150 | 135 | | |
| 515.461 | 27.6 | -6.3 | 21.3 | 46 | -24.7 | PASS | 47.5 | -178.7 | PASS | 100 | 225 | | |
| 800.811 | 27.9 | -2.3 | 25.6 | 46 | -20.4 | PASS | 47.5 | -174.4 | PASS | 200 | 135 | | |
| 883.649 | 28.1 | -1.2 | 26.9 | 46 | -19.1 | PASS | 47.5 | -173.1 | PASS | 250 | 225 | -19.1 | -173.1 |
| | | | | | | | | | | | | | |
| Curti | s-Straus, a Bu | reau Veritas Co | mpany | | | Peal | k Scan Data, 120kH | łz RBW, 300kHz V | | rder - R2107 wer Input - 3V DC B | Battery | | |





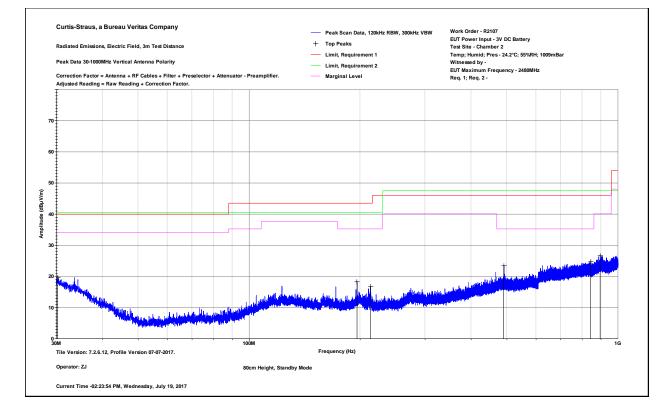


Curtis Straus - a Bureau Veritas Company Radiated Emissions Electric Field 3m Distance Top Peaks Vertical 30-1000MHz Operator: ZJ Work Order - R2107 EUT Power Input - 3V DC Battery Test Site - Chamber 2 Temp; Humid; Pres - 24.2°C; 55%RH; 1009mBar

80cm Height Standby Mode

EUT Maximum Frequency - 2480MHz

| | | | Adjusted | | | Reg 1 | | | Reg 2 | | | Worst Margin | Worst Margin |
|-----------|---------|------------|-----------|--------|--------|-----------|--------|--------|-----------|------------|-----------|-----------------|-----------------|
| | Peak | Correction | Peak | Reg 1 | Reg 1 | Test | Reg 2 | Req 2 | Test | Antenna | Turntable | Reg 1 | Req 2 |
| Frequency | Reading | Factor | Amplitude | Limit | Margin | Results | Limit | Margin | Results | Height | Azimuth | Limit | Limit |
| | | | | | | | | | | | | | |
| MHz | dBµV | dB/m | dBµV/m | dBµV/m | dB | Pass/Fail | dBµV/m | dB | Pass/Fail | entimeters | degrees | dB | dB |
| 30.291 | 23.6 | -3.9 | 19.7 | 40 | -29 | PASS | 40.5 | -19 | PASS | 100 | 135 | -29 | -19 |
| 196.379 | 30.3 | -12 | 18.2 | 43.5 | -45.3 | PASS | 40.5 | -35.3 | PASS | 100 | 0 | | |
| 213.597 | 30.6 | -13.9 | 16.7 | 43.5 | -47.6 | PASS | 40.5 | -37.6 | PASS | 100 | 135 | | |
| 490.896 | 29.7 | -6.3 | 23.4 | 46 | -45.7 | PASS | 47.5 | -35.7 | PASS | 200 | 315 | | |
| 844.533 | 26.9 | -2.1 | 24.8 | 46 | -34.9 | PASS | 47.5 | -24.9 | PASS | 150 | 135 | | |
| 895.943 | 27.3 | -0.6 | 26.7 | 46 | -33.5 | PASS | 47.5 | -23.5 | PASS | 150 | 90 | | |





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| Rev. 7/3/2017 | | | | | | | | |
|---|--------------|---------|-------------------|------------|---------|-----|-----------------|---------------|
| Spectrum Analyzers / Receivers / Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Rental MXE EMI Receiver(1170725) | 20Hz-26.5GHz | N9038A | Agilent | MY51210151 | 1170725 | Ι | 12/22/2017 | 12/22/2016 |
| Radiated Emissions Sites | FCC Code | IC Code | VCCI Code | Range | Asset | Cat | Calibration Due | Calibrated on |
| EMI Chamber 2 | 719150 | 2762A-7 | A-0015 | 30-1000MHz | 1686 | Ι | 12/21/2018 | 12/21/2016 |
| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| 2310 PA | 1-1000MHz | PAM-103 | COM-POWER | 441174 | 2310 | П | 2/4/2018 | 2/4/2017 |
| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Red-White Bilog | 30-2000MHz | JB1 | Sunol | A091604-1 | 1105 | Ι | 8/12/2017 | 8/12/2015 |
| Meteorological Meters | | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | 1 | 4/28/2018 | 4/28/2016 |
| TH A#2078 | | HTC-1 | HDE | | 2078 | Ш | 3/23/2018 | 3/23/2017 |
| Cables | Range | | Mfr | | | Cat | Calibration Due | Calibrated on |
| Asset #1522 | 9kHz - 18GHz | | Florida RF | | | П | 2/11/2018 | 2/11/2017 |
| Asset #2052 | 9kHz - 18GHz | | Florida RF | | | Ш | 3/5/2018 | 3/5/2017 |
| Asset #2053 | 9kHz - 18GHz | | Florida RF | | | П | 10/30/3017 | 10/30/2016 |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Radiated Emissions Table Date: 19-Jul-17 Company: Onset Computer Corporation Work Order: R2107 Engineer: Zac Johnson EUT Desc: MX2201 /2 EUT Operating Voltage/Frequency: 3V DC Humidity: 55% Temp: 24.2C Pressure: 1009mBar Battery Frequency Range: 1-6GHz Measurement Distance: 3 m Notes: Also checked frequency range with 100KHz RBW to reduce noise floor, 1865MHz is only emission EUT Max Freq: 2480MHz FCC Class B High Frequency FCC Class B High Frequency -Antenna Peak Average Preamp Antenna Cable Adjusted Adjusted Peak Average Polarization Frequency Reading Reading Factor Factor Factor Peak Reading Avg Reading Limit Result Limit Margin Result Margin (H/V) (dBµV) (dB) (dB/m) (dBµV/m) (dBµV/m) (MHz) (dBµV) (dB) dBµV/n (Pass/Fail) (dBµV/m (dB) (Pass/Fail (dB) v 1865.0 48.2 28.2 37.4 31.0 3.8 45.6 25.6 74.0 -28.4 Pass 54.0 -28.4 Pass Table Result: Pass Worst Freq: 1865.0 MHz by -28.4 dB Test Site: EMI Chamber 2 Cable 1: Asset #2052 Cable 2: Asset #2053 Cable 3: Asset #150 Analyzer: Rental SA#2 Preamp: Asset #2111 Antenna: Blue Horn Preselector: --v 1.017.188 Ssoft Radiated Emissions Calculator Copyright Curtis-Straus LLC Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Facto

| Radiated | Emissio | ons Tab | le | | | | | | | | | |
|-------------------------|----------------|--------------|------------------|-------------------|-----------------|---------------------|-------------|----------|-------------|--------------|-----------------|-------------------|
| Date: | 19-Jul-17 | | Company: | Onset Con | nputer Co | rporation | | | | | Work Order: | R2107 |
| Engineer: | Zac Johnson | | EUT Desc: | MX2201 /2 | | | | | EUT Operat | ing Voltage | /Frequency: | 3V DC |
| Temp: | 24.2C | | Humidity: | 55% | | Pressure: | 1009mBar | | | | | Battery |
| | Freque | ncy Range: | 6-18GHz | | | | | | Measureme | nt Distance: | 1 m | |
| Notes: | Also checked | frequency ra | nge with 10 | 0KHz RBW | to reduc | e noise floor, no | emissions w | ere seen | | | | |
| • | | | D | | 0-11- | Adverted | | | | | FCC 15.247 | , |
| Antenna Polarization | Frequency | Reading | Preamp Factor | Antenna Factor | Cable Factor | Adjusted Reading | Limit | Margin | Result | Limit | Margin | Result |
| (H / V) | (MHz) | (dBµV) | (dB) | (dB/m) | (dB) | (dBµV/m) | (dBµV/m) | (dB) | (Pass/Fail) | (dBµV/m) | (dB) | (Pass/Fail) |
| No E | Emissions Four | ıd | | | | | | | | | | |
| Table | e Result: | Pass | by | | dB | | | | W | orst Freq: | | MHz |
| Test Site: | EMI Chamber | 2 | Cable 1: | Asset #20 | 52 | | | Cable 2: | Asset #2053 | 8 | Cable 3: | Asset #1509 |
| Analyzer: | Rental SA#2 | | Preamp: | Asset #21 | 11 | | | Antenna: | : Blue Horn | | Preselector: | |
| CSsoft Radiate | d Emissions C | alculator | v 1.017.188 | | | | | | | | Copyright Curti | s-Straus LLC 2000 |
| Adjusted Read | ng = Reading | Preamp Fac | ctor + Anter | na Factor - | + Cable F | actor | | | | | | |



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Rev. 7/26/2017

| Rev. 7/20/2017 | | | | | | | | |
|---|---------------|----------|-------------------|------------|-------|-----|-----------------|---------------|
| Spectrum Analyzers / Receivers / Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| SA #2 (1860) | 9kHz-26.5 GHz | E7405A | Agilent | MY45104916 | 1860 | 1 | 1/16/2018 | 1/16/2017 |
| Radiated Emissions Sites | FCC Code | IC Code | VCCI Code | Range | Asset | Cat | Calibration Due | Calibrated on |
| EMI Chamber 2 | 719150 | 2762A-7 | A-0015 | 1-18GHz | 1686 | I | 12/21/2018 | 12/21/2016 |
| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| 2111 HF Preamp | 0.5-18GHz | PAM-118A | COM-POWER | 551063 | 2111 | | 11/5/2017 | 11/5/2016 |
| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Blue Hom | 1-18Ghz | 3117 | ETS | 157647 | 1861 | T | 2/14/2019 | 2/14/2017 |
| Meteorological Meters | | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Weather Clock (Pressure Only) | | BA928 | Oregon Scientific | C3166-1 | 831 | 1 | 4/28/2018 | 4/28/2016 |
| TH A#2081 | | HTC-1 | HDE | | 2081 | Ш | 3/23/2018 | 3/23/2017 |
| Cables | Range | | Mfr | | | Cat | Calibration Due | Calibrated on |
| Asset #2052 | 9kHz - 18GHz | | Florida RF | | | Ш | 3/5/2018 | 3/5/2017 |
| Asset #2053 | 9kHz - 18GHz | | Florida RF | | | П | 10/30/3017 | 10/30/2016 |
| | | | | | | | | |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

| | ted Em | incian | a Tabl | _ | | | | | | | | | | | |
|---------------------|--|--|--|-----------------------|--|---|--|--------------------------|--|--|---|---|--|---|---|
| | | 1551011 | | | | | | | | | | | | | 5.0107 |
| | 18-Jul-17 Zac Johnso | | | Company: EUT Desc: | | | | | | | CUT | Onerating | VV Voltage/F | ork Order | |
| Temp: | | | | Humidity: | | | | Drees | ire: 1012 | | EUI | Operating | voltage/r | requency | Batterv |
| Temp: | 24.0 | Frequen | cy Pange: | 18-25GHz | | | | Fressu | ire: 1012 | | Mo | asuraman | t Distance: | 0.1 m | Dattery |
| Notes | No Emissio | | , , | | | | | | | | WIC | | Max Freq: | - | |
| Hote 3. | NO EIIII33K | ono r ound, | Ochiel Oh | | | | | | | | | 201 | | 240010112 | |
| Antenna | | Peak | | Preamp | Antenna | Cable | Adjusted | Adjusted | Adjusted | | | | FCC Clas | s B High F | requency |
| Polarization | Frequency | Reading | Reading | Factor | Factor | Factor | Peak Reading | Reading | Reading (EIRP) | Limit | Margin | Result | Limit | Margin | Result |
| (H/V) | (MHz) | (dBµV) | (dBµV) | (dB) | (dB/m) | (dB) | (dBµV/m) | (dBµV/m) | (dBm) | (dBµV/m) | (dB) | (Pass/Fail) | (dBm) | (dB) | (Pass/Fail) |
| | No Emissi | ons Found | | | | | | | | | | | -30.0 | | Pass |
| Table I | Result: | | Pass | by | | dB | | | | | | Wo | rst Freq: | | MHz |
| | diated Emis | | | Preamp: 1.017.179 | White | | | | | | Antenna | : 18-26.5GI | Hz Horn Pr | | traus LLC 2000 |
| rajaotoa i | teading – It | eading - Pr | eamp Fact | or + Antenr | na Factor + | Cable Fa | ctor | | | | | | | | |
| Rev. 7/16/2 | 0 | 0 | | | Ra | Cable Fau Inge 26.5 GHz | MN E4407E | В | Mfr Agilent | SN MY45113816 | Asset 1284 | Cat Ca | libration Du 2/28/2018 | | brated on 28/2017 |
| Rev. 7/16/2 | 2017 Ctrum Analy Radia | zers / Rece | eivers /Pres | | Ra 100Hz-: FCC | inge | MN | e | | | | 1 | libration Du | ₂⁄ ue Cali | |
| Rev. 7/16/2 Spec | 2017 Ctrum Analy Radia | zers / Rece Gold ted Emissi EMI Chamb | ons Sites er 2 enuators / F | selectors | Ra 100Hz- FCC 71! Ra | inge 26.5 GHz : Code | MN E4407E IC Code | e 7 | Agilent | MY45113816 Range | 1284 Asset | l Cat Ca | libration Du 2/28/2018 libration Du | 2/ ue Cali 12 ue Cali | 28/2017 brated on |
| Rev. 7/16/2 Spec | 2017 ctrum Analy Radia reamps /Co | zers / Rece Gold ted Emissi EMI Chamb uplers Atte | ons Sites er 2 muators / F s | selectors | Ra 100Hz:- FCC 71: Ra 18-26 Ra | inge 26.5 GHz © Code 9150 inge | MN E4407E IC Cod 2762A- MN | e 7 0-60-8P-4 | Agilent VCCI Code A-0015 Mfr | MY45113816 Range 1-18GHz SN | 1284 Asset 1686 Asset | I Cat Ca I Cat Ca II Cat Ca | libration Du 2/28/2018 libration Du 12/21/2018 libration Du | ue Cali 12 ue Cali 9/ ue Cali | 28/2017 brated on /21/2016 brated on |
| Rev. 7/16/2 Spec | 2017 Strum Analy Radia reamps/Co F | zers / Reca Gold ted Emissi EMI Chamb uplers Atte HF (Yellov Antenna HF (White) H | ons Sites er 2 enuators / F w) s Hom Meters ssure Only) | selectors Filters | Ra 100Hz:- FCC 71: Ra 18-26 Ra | nge 26.5 GHz Code 9150 nge 5.5GHz nge | MN E4407E IC Codd 2762A- MN AFS4-18002650 MN | e 7 0-60-8P-4 M | Agilent VCCI Code A-0015 Mfr CS Mfr | MY45113816 Range 1-18GHz SN 467559 SN | 1284 Asset 1686 Asset 1266 Asset | I Cat Ca I Cat Ca II Cat Ca III Ve | libration Du 2/28/2018 libration Du 12/21/2018 libration Du 9/16/2017 libration Du | 2/ ue Cali 12 ue Cali 9/ ue Cali se da ue Cali 4/ | 28/2017 brated on /21/2016 brated on 16/2016 brated on |



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Duty Cycle Correction Factor

Limits:

Unless otherwise specified, e.g., \S 15.255(b), and 15.256(I)(5), when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

[15.35(c)]

MEASUREMENTS/RESULTS

| Date | 18-Jul-17 | Company: | Onset Computer Corporation | | | Work Order: R2107 |
|-------------|------------------|-----------------------------|----------------------------|---------------|-----------------------|------------------------|
| Engineer: | Zac Johnson | EUT Desc: | MX2201 /2 | | EUT Operating Vo | ltage/Frequency: 3V DC |
| Temp: | 24.2C | Humidity: | 55% | Pressure: 100 | 09mBar | Battery |
| | I | Frequency Range: Single Cha | nnel | | Measurement Dist | ance: 3 m |
| Notes | Channel 2476 MHz | | | | EUT Max | Freq: 2480MHz |
| Antenna | | | | | | |
| olarization | Frequency | On Time | Period | | Duty Cycle Correction | on Factor |
| (H / V) | (MHz) | (ms) | (ms) | | | |
| N/A | 2476.0 | 6.648 | 100.0 | | -23.546 | |
| | e Result: | by | dB | | Worst F | Freq: MHz |
| Tabl | e Nesun. | | | | | |
| | EMI Chamber 2 | Cable 1: | Asset #2052 | | Cable 2: Asset #2053 | Cable 3: Asset # |

Note: Worst case assumed; 2 pulses clusters in 100ms window. Each pulse cluster consists of 2 individual pulses (1.662ms)

| Rev. 7/26/2017 | | | | | | | | |
|--|------------------------------|--------------------|--------------------------|----------------------|--------------|----------|------------------------------|----------------------------|
| Spectrum Analyzers / Receivers / Preselectors | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| SA #2 (1860) | 9kHz-26.5 GHz | E7405A | Agilent | MY45104916 | 1860 | I | 1/16/2018 | 1/16/2017 |
| Radiated Emissions Sites | FCC Code | IC Code | VCCI Code | Range | Asset | Cat | Calibration Due | Calibrated on |
| EMI Chamber 2 | 719150 | 2762A-7 | A-0015 | 1-18GHz | 1686 | Т | 12/21/2018 | 12/21/2016 |
| Preamps /Couplers Attenuators / Filters | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| 2111 HF Preamp | 0.5-18GHz | PAM-118A | COM-POWER | 551063 | 2111 | Ш | 11/5/2017 | 11/5/2016 |
| Antennas | Range | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Blue Horn | 1-18Ghz | 3117 | ETS | 157647 | 1861 | I | 2/14/2019 | 2/14/2017 |
| | | | | | | | | |
| Meteorological Meters | | MN | Mfr | SN | Asset | Cat | Calibration Due | Calibrated on |
| Meteorological Meters Weather Clock (Pressure Only) | | MN BA928 | Mfr Oregon Scientific | SN C3166-1 | Asset 831 | Cat | Calibration Due 4/28/2018 | Calibrated on 4/28/2016 |
| 5 | | | | | | Cat I | | |
| Weather Clock (Pressure Only) | Range | BA928 | Oregon Scientific | | 831 | I | 4/28/2018 | 4/28/2016 |
| Weather Clock (Pressure Only) TH A#2081 | Range 9kHz - 18GHz | BA928 | Oregon Scientific HDE | | 831 | | 4/28/2018 3/23/2018 | 4/28/2016 3/23/2017 |

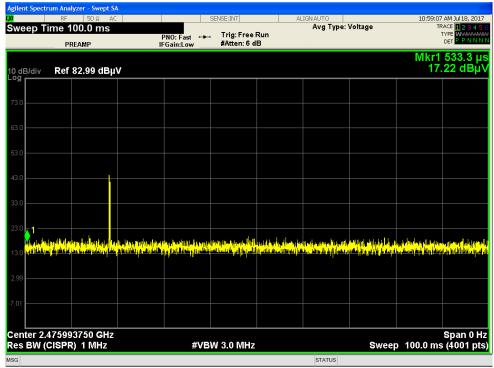
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.





| _ | RF | 50 Ω A | | | | | SENSE:I | .NII | | Al | LIGNAUTO | | V - 14 | | 12 | :08:31 | |
|------------|--|-----------------------|------------------------------|----------|------------------|--------------------------------|--------------------------------|-------------------|---|-------------------|--------------|--------------|----------------|-----|-----------------|-----------------|------------------------------------|
| ker 4 | | 87 ms EAMP | | | PNO: F Gain:L | | | g:Free ten:6 d | | | AVg | Type: | Voltage | | | T | ACE 1 2 3 YPE WAAA DET P P N |
| B/div | Ref | 82.99 dB | v | | | | | | | | | | | | | | .662 39 dE |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | **1 | A <u>3</u> | 4 | | | | | | | | | | | |
| | | | | ,†¢² | Ĭ. ↓ | • | | | | | | | | | | | |
| | | | | 1. | | | , | | | | l. | | | | | | harana |
| | 1. | الطون البروي والرواري | talition designed | 1.1 | . I. I. | أد اللو ألعنا. | Line and A | 1.1.1. All states | ALL DATE OF A DE LA D | أبار المركبة أرقه | | 1. De | أسيانكهما أفغت | | المرافل وباللها | I I I I I I I I | |
| i hingde i | | | | | | WW | in prin | | | | WARKS | h | | | We Here | WW | Prin i |
| i hinada i | | | | | | With | | | | a ha h | N. WINK | Hi ļi | | | Weight | | |
| nter 2.4 | 17599 | 3750 GHz) 1 MHz | | | | | BW 3.0 | | | | | | | eep | 5.067 | | Span (|
| nter 2.4 | 17599 CISPR | 3750 GHz | × | | | #VE | BW 3.0 |) MHz | | | | | | | | ' ms | Span (|
| nter 2.4 | 17599 CISPR | 3750 GHz | × 1.333 | | | #VE Y 25.10 | 3₩ 3.(|) MHz | | | | | | | 5.067 | ' ms | Span (|
| nter 2.4 | 17599 CISPR | 3750 GHz | × 1.333 1.429 1.563 | ms ms | | #VE 25.10 27.69 36.85 | BW 3.0 dBµV dBµV dBµV |) MHz | | | | | | | 5.067 | ' ms | Span (|
| nter 2.4 | 17599 CISPR | 3750 GHz | × 1.333 1.429 | ms ms | | #VE 25.10 27.69 36.85 | BW 3.0 dBµV dBµV |) MHz | | | | | | | 5.067 | ' ms | Span (|
| ter 2.4 | 17599 CISPR | 3750 GHz | × 1.333 1.429 1.563 | ms ms | | #VE 25.10 27.69 36.85 | BW 3.0 dBµV dBµV dBµV |) MHz | | | | | | | 5.067 | ' ms | Span (|
| ter 2.4 | 17599 CISPR | 3750 GHz | × 1.333 1.429 1.563 | ms ms | | #VE 25.10 27.69 36.85 | BW 3.0 dBµV dBµV dBµV |) MHz | | | | | | | 5.067 | ' ms | Span (|
| ter 2.4 | 17599 CISPR | 3750 GHz | × 1.333 1.429 1.563 | ms ms | | #VE 25.10 27.69 36.85 | BW 3.0 dBµV dBµV dBµV |) MHz | | | | | | | 5.067 | ' ms | Span (|
| nter 2.4 | 17599 CISPR | 3750 GHz | × 1.333 1.429 1.563 | ms ms | | #VE 25.10 27.69 36.85 | BW 3.0 dBµV dBµV dBµV |) MHz | | | | | | | 5.067 | ' ms | Span (|

Single pulse



Period (milli-second window)



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Conducted Spurious Emissions

Limits: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth that contains the highest level of desired power. [15.247(d)]

MEASUREMENTS/RESULTS

| | C | onducted B | andedg | е | | | | |
|---|---------------------------|-------------------------------|----------------------|-------------------------|----------------------|----------|------------------------------|----------------------------|
| Date: 17-Jul | Company: Onset C | omputer Corporation | | | | | Work Orde | er: R2107 |
| Engineer: Zac Johnson | EUT: MX2201/ | 2 | | | Operati | ing V | oltage/Frequenc | :y: 3V Battery |
| Temp: 23.7°C | Humidity: 52% | Р | ressure: 1007 | 7mBar | | | | |
| Frequency Range: 2402-2 | 480 MHz | | nt Type: Cond | | | TS M | leas Guidance V0 | 5r02 |
| Notes: | | Weasurement | | , KDB 33001 | 4 D01 L | 13 10 | leas Guidance vo | 5102 |
| | E | Bandedge (dBm) | | | | D | elta to Peak Limit | |
| Low Bandedge | | -79.669 | | | 48. | 967 | (db) ≥ 20 | Pass |
| High Bandedge | | -79.348 | | | | 411 | ≥ 20 | Pass |
| Test Site: EMC-5 | Cable: 2288 cb | | Atte | nuator: 212 | 1 Pad | | 220 | 1 435 |
| Analyzer: 1118470 SA | | | | | | | Copyright Cur | tis-Straus LLC 200 |
| | | | | | | | 17 0 | |
| | | | | | | | | |
| | Condu | cted Spuric | ous Emis | sions | | | | |
| Date: Jul 12 to 17, 2017 | Company: Onset C | omputer Corporation | 1 | | | | Work Orde | er: R2107 |
| Engineer: Zac Johnson | EUT: MX2201 | 2 | | | Operat | ing V | oltage/Frequenc | y: 3V Battery |
| Temp: 23.7°C | Humidity: 52% | Р | ressure: 1007 | 7mBar | | | | |
| Frequency Range: 9 KHz | to 25 GHz | Measureme | nt Type: Cond | ducted | | | | |
| | | Measurement | Method: FCC | KDB 55807 | '4 D01 C | TS M | eas Guidance V0 | 5r02 |
| Notes: | | | | | | | | |
| | | | | | | | FCC 15.247 | |
| | | | | | | | | |
| Spurious Emissions were inves found were at noise floor leve | els; except the fundament | al frequencies. Hig | ghest noise fl | oor level w | as found | | • | |
| which is more than 10dB below | | | <u> </u> | | | | | |
| Test Site: EMC-5 | Cable: 2288 cb | | Atte | nuator: 212 | 1 Pad | | | |
| Analyzer: 1118470 SA | | | | | | | Copyright Cur | tis-Straus LLC 200 |
| | | | | | | | | |
| Rev. 7/26/2017 | | | | | | | | |
| Spectrum Analyzers / Receivers Rental EXA Signal Analyzer(| | MN GHz N9010A-526;K | Mfr AT | SN MY51170010 | Asset 1118472 | Cat | Calibration Due 7/25/2018 | Calibrated on 7/25/2017 |
| Preamps /Couplers Attenuate API - 30dB 20W Attenu | | MN Hz 89-30-11 | Mfr API Weinschel | SN 703 | Asset 2121 | Cat I | Calibration Due 3/22/2018 | Calibrated on 3/22/2217 |
| Cables Asset #2288 | Range 9KHz-26.50 | GHz FLC-1.5FT-SMSM+ | Mfr Mini-Circuits | 16021029 | | Cat ∥ | Calibration Due 1/27/2018 | Calibrated on 1/27/2017 |

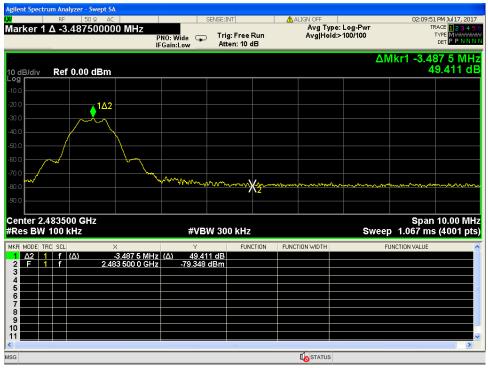
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.





| RF 50 rker 1 ∆ 12.015 | | | int rig: Free Run tten: 10 dB | ALIGN OFF Avg Type Avg Hold: | | 02:11:00 PM Jul 17, 20 TRACE 1234 TYPE MWWW DET P P N N |
|--|------------------------|---|-------------------------------------|------------------------------------|-------------------|--|
| dB/div Ref 0.00 | dBm | | | | ΔMkt | 1 12.015 0 MI 48.967 c |
| | | | | | | |
| | | | | | | 1Δ2 |
| 0 | | | | | | |
| | | | | | | |
| | | | | | | |
| 0 Wet-m-pll-mthroughout MP | ฃ๛๛ <i>๛๚๚๛</i> ๚๚๛๛๛๛ | and for the property of the property of | 14 | hanner northur Anner an Merre | | |
| nter 2.39000 GHz | , | | | | | Span 30.00 M |
| es BW 100 kHz | | #VBW 3 | 00 kHz | | Sweep 2 | 2.933 ms (4001 p |
| MODE TRC SCL $\Delta 2$ 1 f (Δ) | × 12.015 0 MH; | γ z (Δ) 48.967 dE | FUNCTION | FUNCTION WIDTH | FUNC ¹ | TION VALUE |
| F 1 f | 2.390 000 0 GHz | z -79.669 dBn | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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| | | | | I STATUS | | |

Conducted Low Band Edge - TX on Low Channel



Conducted High Band Edge – TX on High Channel





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Low Channel 9 KHz - 25GHz Conducted Spurious Reference



Low Channel 9 KHz -25GHz Conducted Spurious







Middle Channel 9 KHz-25GHz Conducted Spurious Reference



Middle Channel 9 KHz -25GHz Conducted Spurious







High Channel 9 KHz -25GHz Conducted Spurious Reference



High Channel 9 KHz -25GHz Conducted Spurious





Limit: The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission. [15.247(e)]

MEASUREMENTS/RESULTS

| Date: 7/12/2017 | Company: | Onset Compute | er Corporation | | | Work Order: | R2107 |
|------------------------|-----------------------|----------------|----------------------|-------------|--------------|--------------|------------|
| Engineer: Zac Johnsor | n EUT : | MX2201/2 | | Oper | ating Voltag | e/Frequency: | 3V Battery |
| Temp: 23.7°C | Humidity: | 52% | Pressure: 1007mBar | | | | |
| Frequency Range: 2 | 2402-2480 MHz | Measurer | ment Type: Conducted | ł | | | |
| Notes: | | | | | | | |
| Frequency | Peak Reading | Cable Loss | Attenuator Loss | Peak PSD | Limit | Margin | Result |
| (MHz) | (dBm) | (dB) | (dB) | (dBm) | (dBm) | (dB) | |
| 2402 | -46.32 | 0.32 | 30 | -16.00 | 8.0 | -24.00 | Pass |
| 2440 | -45.81 | 0.32 | 30 | -15.49 | 8.0 | -23.49 | Pass |
| 2480 | -45.71 | 0.32 | 30 | -15.39 | 8.0 | -23.39 | Pass |
| Test Site: EMC-5 | Cable: | 2288 cbl | | Attenuator: | 2121 Pad | | |
| Analyzer: 1118470 SA | | | | | | | |
| D(dBm) = Reading (dBm) |) + Cable Loss (dB) + | Attenuator Los | s (dBm) | | | | |
| | | | | | | | |

| Rental EXA Signal Analyzer(1118472) | 9KHz-26.5GHz | N9010A-526;K | AT | MY51170010 | 1118472 | | 7/25/2018 | 7/25/2017 | |
|--|------------------------------|-----------------------|----------------------|------------------|----------------------|-----------|------------------------------|----------------------------|--|
| Preamps /Couplers Attenuators / Filters API - 30dB 20W Attenuator | Range 9KHz-40GHz | MN 89-30-11 | Mfr API Weinschel | SN 703 | Asset 2121 | Cat I | Calibration Due 3/22/2018 | Calibrated on 3/22/2217 | |
| Cables Asset #2288 | Range 9KHz-26.5GHz | FLC-1.5FT-SMSM+ | Mfr Mini-Circuits | 16021029 | | Cat II | Calibration Due 1/27/2018 | Calibrated on 1/27/2017 | |

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

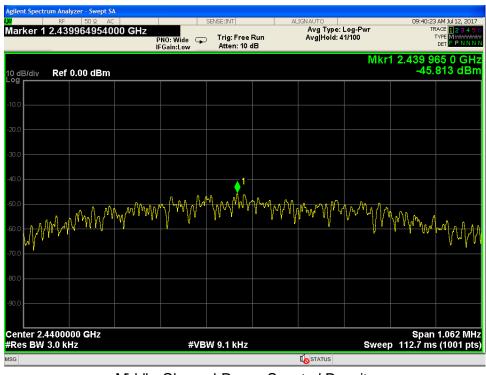




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Middle Channel Power Spectral Density





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High Channel Power Spectral Density





Occupied Bandwidth

Requirement: When an occupied bandwidth is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is its 99% emission bandwidth, as calculated or measured.

[RSS-GEN 4.6.1]

MEASUREMENTS/RESULTS

| : 3V Batter |
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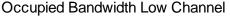
| Rev. 7/26/2017 Spectrum Analyzers / Receivers / Preselectors Rental EXA Signal Analyzer(1118472) | Range 9KHz-26.5GHz | MN N9010A-526;K | Mfr AT | SN MY51170010 | Asset 1118472 | Cat | Calibration Due 7/25/2018 | Calibrated on 7/25/2017 |
|--|------------------------------|---------------------------|-----------------------------|-------------------------|-------------------------|-----------|------------------------------|----------------------------|
| Preamps /Couplers Attenuators / Filters API - 30dB 20W Attenuator | Range 9KHz-40GHz | MN 89-30-11 | Mfr API Weinschel | SN 703 | Asset 2121 | Cat I | Calibration Due 3/22/2018 | Calibrated on 3/22/2217 |
| Cables Asset #2288 | Range 9KHz-26.5GHz | FLC-1.5FT-SMSM+ | Mfr Mini-Circuits | 16021029 | | Cat II | Calibration Due 1/27/2018 | Calibrated on 1/27/2017 |

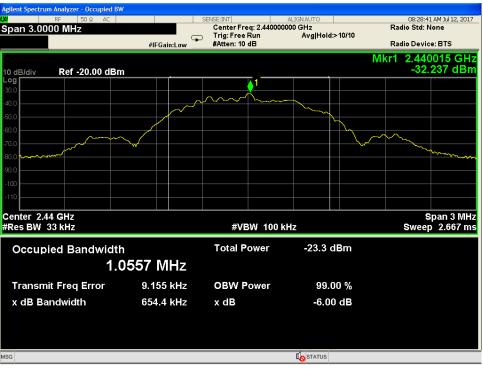
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.





Analyzer - Occupied BW 08:31:46 AM Jul 12, 2017 Radio Std: None Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Trig: Free Run #Atten: 10 dB Avg|Hold:>10/10 Ģ Radio Device: BTS #IEGain:Low 2.402012 GHz -32.574 dBm Mkr1 Ref -20.00 dBm l0 dB/div Center 2.402 GHz #Res BW 33 kHz Span 3 MHz Sweep 2.667 ms #VBW 100 kHz **Total Power** -23.6 dBm Occupied Bandwidth 1.0543 MHz Transmit Freq Error 8.847 kHz **OBW Power** 99.00 % x dB Bandwidth x dB -6.00 dB 653.1 kHz **I**STATUS MSG



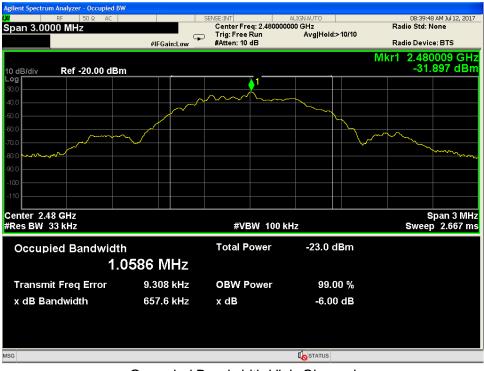


Occupied Bandwidth Middle Channel



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Occupied Bandwidth High Channel





Measurement Uncertainty

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

| | | Maximum allanak la marantalar |
|--|--------------------------|-------------------------------|
| Measurement Radiated Emissions (30-1000MHz) | Expanded Uncertainty k=2 | Maximum allowable uncertainty |
| NIST CISPR | 5.6dB 4.6dB | N/A 5.2dB (Ucispr) |
| Radiated Emissions (1-26.5GHz) | 4.6dB | N/A |
| Radiated Emissions (above 26.5GHz) | 4.9dB | N/A |
| Magnetic Radiated Emissions | 5.6dB | N/A |
| Conducted Emissions NIST | 3.9dB | N/A |
| CISPR | 3.6dB | 3.6dB (Ucispr) |
| Telco Conducted Emissions (Current) | 2.9dB | N/A |
| Telco Conducted Emissions (Voltage) | 4.4dB | N/A |
| Electrostatic Discharge | 11.5% | N/A |
| Radiated RF Immunity (Uniform Field) | 1.6dB | N/A |
| Electrical Fast Transients | 23.1% | N/A |
| Surge | 23.1% | N/A |
| Conducted RF Immunity | 3dB | N/A |
| Magnetic Immunity | 12.8% | N/A |
| Dips and Interrupts | 2.3V | N/A |
| Harmonics | 3.5% | N/A |
| Flicker | 3.5% | N/A |
| Radio frequency (@ 2.4GHz) | 3.23 x 10 ⁻⁸ | 1 x 10 ⁻⁷ |
| RF power, conducted | 0.40dB | 0.75dB |
| Maximum frequency deviation: • Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency | 3.4% 0.3dB | 5% 3dB |
| Adjacent channel power | 1.9dB | 3dB |
| Conducted spurious emission of transmitter, valid up to 12.75GHz | 2.39dB | 3dB |
| Conducted emission of receivers | 1.3dB | 3dB |
| Radiated emission of transmitter, valid up to 26.5GHz | 3.9dB | 6dB |
| Radiated emission of transmitter, valid up to 80GHz | 3.3dB | 6dB |
| Radiated emission of receiver, valid up to 26.5GHz | 3.9dB | 6dB |
| Radiated emission of receiver, valid up to 80GHz | 3.3dB | 6dB |
| Humidity | 2.37% | 5% |
| Temperature | 0.7°C | 1.0°C |
| Time | 4.1% | 10% |
| RF Power Density, Conducted | 0.4dB | 3dB |
| DC and low frequency voltages | 1.3% | 3% |
| Voltage (AC, <10kHz) | 1.3% | 2% |
| Voltage (DC) | 0.62% | 1% |
| The above reflects a 95% confidence level | | |



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Conditions of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/orits affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within a ny time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.

2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based sole ly on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.

3. The Company may, in its sole discretion, destroy samples which have been furn ished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contem plated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.

4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.

5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS", "MTL", "ACTS", "MTL-ACTS" and CURTIS-STRAUS (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or good will associated with the Marks or the image or reputation of the Company or its affiliates.

6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.

The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaim s all liability in such capacities. Clientfurther understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor doe s the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release a ny third party from its obligations and duties with respect to the tested goods.

10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.

11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.

12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets for the the particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.

13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.

14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.



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15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOT WITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.\$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of lawsprinciples. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

The complete list of the Approved Subcontractors Bureau Veritas Consumer Products Services, Inc. may use to delegate the performance of work can be provided upon request.

Rev.160009121(2)_#684340v14CS





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