
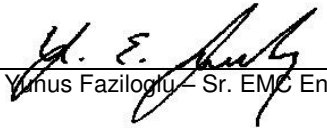




# Test Report



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS

|                     |   |
|---------------------|---|
| Report No           | EQ2569-1  |
| Client              | Ideal Industries, Inc.  |
| Address             | Becker Place<br>Sycamore, IL 60178  |
| Phone               | (815) 895-1295  |
| Items tested        | SCD1000-EM  |
| FCC ID              | 2AAMXSCD1000EM  |
| IC                  | 11250A-SCD1000EM  |
| FRN                 | 0002862225  |
| Equipment Type      | Digital Transmission System   |
| Equipment Code      | DTS   |
| Emission Designator | 767KG1D   |
| FCC/IC Rule Parts   | CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 1   |
| Test Dates          | August 25, 29 and September 2, 2016   |
| Results             | As detailed within this report  |
| Prepared by         | <br>Tuyen Tuong – Test Engineer            |
| Authorized by       | <br>Yunus Faziloglu – Sr. EMC Engineer     |
| Issue Date          | 1/23/2017   |
| Conditions of Issue | This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 31 of this report. |

Curtis-Straus LLC 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 7-20-07 (DW)



## 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 1

The product is the SCD1000-EM. It is a digitally modulated transmitter that operates in the 902-928MHz frequency range. The product was tested with a permanently attached wire antenna with 4.55dBi gain.

We found that the product met the above requirements without modification. The test samples were received in good condition.

Model tested: SCD1000-EM

Additional model: SCLED1000EM

Results in this report also represent the additional model above. Per client, circuit and PCB are identical for both models. The only difference is where dim and dim return leads egress from the product housing.



**Test Methodology**

All testing was performed according to the following rules/procedures/documents;  
 CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 1, ISED Canada RSS-Gen Issue 4, FCC KDB 558074 D01 DTS Measurement Guidance v03r05 and ANSI C63.10-2013.

Radiated emissions were maximized by rotating the device around three orthogonal axes as well as varying the test antenna’s height and polarity. AC line conducted emissions testing was performed with a 50Ω/50μH LISN. The EUT operating voltage was 120/277VAC at 60Hz.

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

- Low channel = 902.7MHz
- Mid channel = 915MHz
- High channel = 927.3MHz

The following bandwidths were used during radiated spurious and AC line conducted emissions tests:

| Frequency  | RBW    | VBW   |
|------------|--------|-------|
| 0.15-30MHz | 9kHz   | 30kHz |
| 30-1000MHz | 120kHz | 1MHz  |
| 1-10GHz    | 1MHz   | 3MHz  |



**Product Tested - Configuration Documentation**

| EUT Configuration  |                                    |         |             |            |          |          |                                     |        |            |         |
|--|------------------------------------|---------|-------------|------------|----------|----------|-------------------------------------|--------|------------|---------|
| <b>Work Order:</b>   | Q2569                              |         |             |            |          |          |                                     |        |            |         |
| <b>Company:</b>  | Ideal Industries, Inc              |         |             |            |          |          |                                     |        |            |         |
| <b>Company Address:</b>  | Becker Place<br>Sycamore, IL 60178 |         |             |            |          |          |                                     |        |            |         |
| <b>Contact:</b>  | Tim Tunnell                        |         |             |            |          |          |                                     |        |            |         |
|  | MN                                 |         |             | PN         |          |          | SN                                  |        |            |         |
| <b>EUT:</b>  | SCD1000-EM                         |         |             | --         |          |          | 02001D67 (Radiated & Conducted EMI) |        |            |         |
|  | SCD1000-EM                         |         |             | --         |          |          | Sample 2 (RF Measurement)           |        |            |         |
| <b>EUT Description:</b>  | Smart Connector                    |         |             |            |          |          |                                     |        |            |         |
| <b>EUT TX Frequency:</b>   | 902.7 to 927.3 MHz                 |         |             |            |          |          |                                     |        |            |         |
| Port Label   | Port Type                          | # ports | # populated | cable type | shielded | ferrites | length (m)                          | in/out | under test | comment |
| AC Mains   | Power AC                           | 1       | 1           | Power AC   | No       | No       | 1                                   | in     | yes        |         |
| Antenna  | other                              | 1       | 1           | other      | No       | No       | 0.05                                | in     | yes        |         |
| Load   | Power AC                           | 1       | 1           | Power AC   | No       | No       | 3                                   | in     | yes        |         |
| Dimming  | Power AC                           | 1       | 1           | other      | No       | No       | 3                                   | in     | yes        |         |
| <b>Software Operating Mode Description:</b>  |                                    |         |             |            |          |          |                                     |        |            |         |
| EUT was set to transmit at Low (902.7MHz), Middle (915MHz) and High (927.3MHz) channels. |                                    |         |             |            |          |          |                                     |        |            |         |



## Statement of Conformity

| RSS-GEN | RSP-100 | RSS 247 | Part 15          | Comments   |
|---------|---------|---------|------------------|--|
| 6.3     |         |         | 15.15(b)         | There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements.  |
|         | 3.1     |         | 15.19            | The label is shown in the label exhibit.   |
|         | 4       |         | 15.21            | Information to the user is shown in the instruction manual exhibit.  |
|         |         |         | 15.27            | No special accessories are required for compliance.  |
| 3, 6.1  |         |         | 15.31            | The EUT was tested in accordance with the measurement standards in this section.   |
| 6.13    |         |         | 15.33            | Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.  |
| 8.1     |         |         | 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.      |
| 8.3     |         |         | 15.203           | The antenna for this device is a permanently attached wire antenna with 4.55dBi gain.  |
| 8.10    |         |         | 15.205<br>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           | EUT meets the AC Line conducted emissions requirements of this section.  |
|         |         |         | 15.247           | The unit complies with the requirements of 15.247  |
|         |         | RSS 247 |                  | The unit complies with the requirements of RSS-247   |
| 6.6     |         |         |                  | Occupied Bandwidth measurements were made.   |



# Test Results

## Bandwidth

### LIMIT

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

## MEASUREMENTS / RESULTS

| 6dB BANDWIDTH                    |               |                                 |              |  |
|----------------------------------|---------------|---------------------------------|--------------|--|
| Date: 25-Aug-16                  |               | Company: Ideal Industries, Inc. |              | Work Order: Q2569                            |
| Engineer: Tuyen Truong           |               | EUT Desc: SCD1000               |              | EUT Operating Voltage/Frequency: 120Vac/60Hz |
| Temp: 23.4°C                     |               | Humidity: 50%                   |              | Pressure: 1010mBar                           |
| Frequency Range: 902.7-927.3 MHz |               |                                 |              |  |
| Notes:                           |               |                                 |              |  |
| Frequency (MHz)                  | Reading (KHz) | 6dB BW                          |              |  |
|                                  |               | Limit (KHz)                     | Margin (KHz) | Result (Pass/Fail)                           |
| 902.7                            | 647.903       | ≥500                            | +147.903     | Pass   |
| 915                              | 647.869       | ≥500                            | +147.869     | Pass   |
| 927.3                            | 648.396       | ≥500                            | +148.396     | Pass   |
| Test Site: CEM15                 |               | Attenuation: Asset#791          |              |  |
| Analyzer: SA#1328                |               |                                 |              |  |

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Rev. 8/21/2016

| Spectrum Analyzers / Receivers / Preselectors | Range         | MN             | Mfr                      | SN         | Asset       | Cat     | Calibration Due       | Calibrated on         |
|---|---------------|----------------|--------------------------|------------|-------------|---------|-----------------------|-----------------------|
| SA EMI Chamber (1328)                         | 9kHz-13.2 GHz | E4405B         | Agilent                  | MY44210241 | 1328        | I       | 2/26/2017             | 2/26/2016             |
| Conducted Test Sites (Mains / Telco)          | FCC Code      |                | VCCI Code                |            |             | Cat     | Calibration Due       | Calibrated on         |
| CEM15   | 719150        |                | A-0015                   |            |             | III     | NA                    | N/A                   |
| Meteorological Meters                         |               | MN             | Mfr                      | SN         | Asset       | Cat     | Calibration Due       | Calibrated on         |
| Weather Clock (Pressure Only)<br>TH A#2085    |               | BA928<br>HTC-1 | Oregon Scientific<br>HDE | C3166-1    | 831<br>2085 | I<br>II | 4/28/2018<br>4/5/2017 | 4/28/2016<br>4/5/2016 |
| Preamps/Couplers Attenuators / Filters        | Range         | MN             | Mfr                      | SN         | Asset       | Cat     | Calibration Due       | Calibrated on         |
| HF 20dB 50W Attenuator                        | 0.009-18 GHz  | PE 7019-20     | Pasternack               | 1          | 791         | II      | 8/14/2017             | 8/14/2016             |

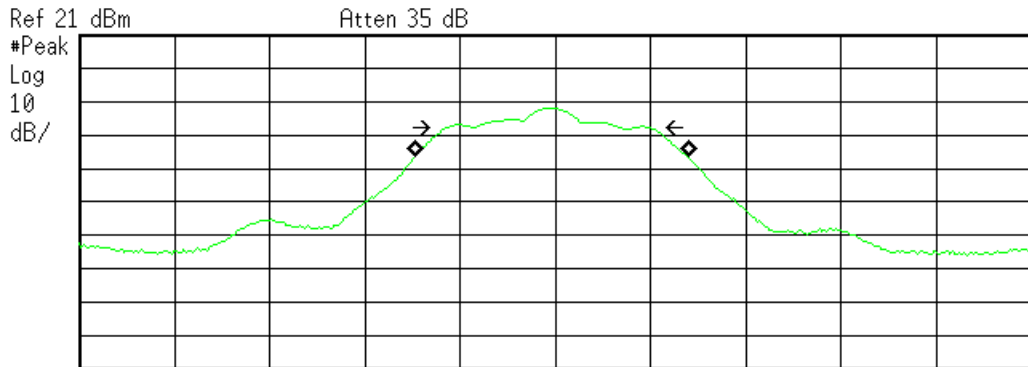
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



**PLOT(s)**

Agilent 08:03:11 Aug 25, 2016

R T



Ref 21 dBm Atten 35 dB  
 #Peak  
 Log  
 10  
 dB/  
 Center 902.7 MHz Span 3 MHz  
 #Res BW 100 kHz #VBW 300 kHz Sweep 5 ms (401 pts)

**Occupied Bandwidth** **857.2500 kHz**  
**Occ BW % Pwr** 99.00 %  
**x dB** -6.00 dB

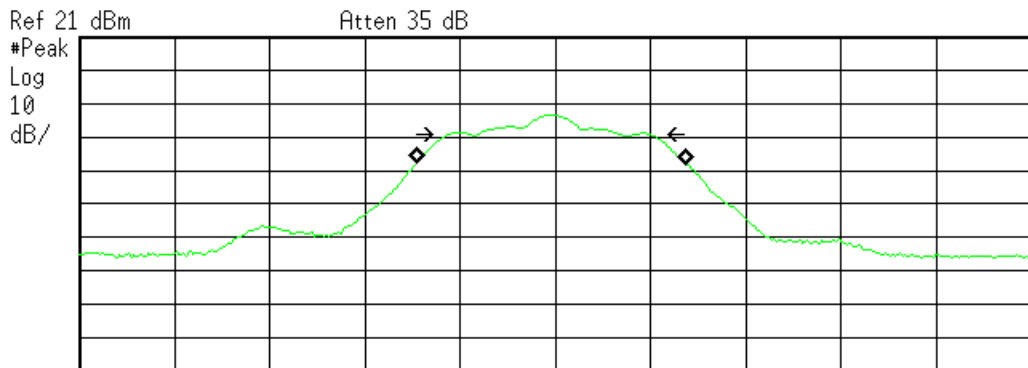
**Transmit Freq Error** -11.433 kHz  
**x dB Bandwidth** 647.903 kHz



6dB Bandwidth – Low Channel

Agilent 08:19:33 Aug 25, 2016

R T



Ref 21 dBm Atten 35 dB  
 #Peak  
 Log  
 10  
 dB/  
 Center 915 MHz Span 3 MHz  
 #Res BW 100 kHz #VBW 300 kHz Sweep 5 ms (401 pts)

**Occupied Bandwidth** **852.7748 kHz**  
**Occ BW % Pwr** 99.00 %  
**x dB** -6.00 dB

**Transmit Freq Error** -11.108 kHz  
**x dB Bandwidth** 647.869 kHz



6dB Bandwidth – Mid Channel

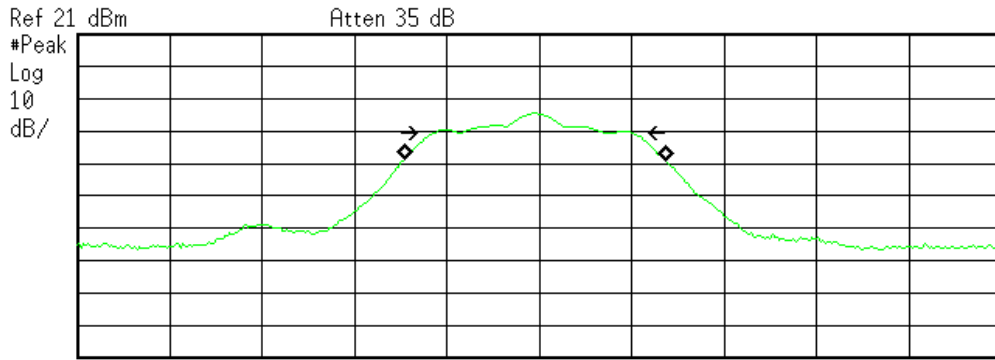
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Agilent 08:23:01 Aug 25, 2016

R T



Center 927.3 MHz Span 3 MHz  
 #Res BW 100 kHz #VBW 300 kHz Sweep 5 ms (401 pts)

Occupied Bandwidth  
 850.5329 kHz

Occ BW % Pwr 99.00 %  
 x dB -6.00 dB

Transmit Freq Error -12.914 kHz  
 x dB Bandwidth 648.396 kHz

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6dB Bandwidth – High Channel



## Fundamental Emission Output Power

### LIMIT

Conducted Output Power

1 Watt

[15.247(b) (3)]

Per 558074 D01 DTS Measurement Guidance v03r05 Section 9.2.2.2 (AVGSA-1 Average Conducted Output Power)

## MEASUREMENTS / RESULTS

| Fundamental Emission Output Power      |               |                                 |                               |  |                   |                    |
|--|---------------|---------------------------------|-------------------------------|--|-------------------|--------------------|
| Date: 25-Aug-16                        |               | Company: Ideal Industries, Inc. |                               |  | Work Order: Q2569 |                    |
| Engineer: Tuyen Truong                 |               | EUT Desc: SCD1000               |                               | EUT Operating Voltage/Frequency: 120Vac/60Hz |                   |                    |
| Temp: 23.4°C                           |               | Humidity: 50%                   |                               | Pressure: 1010mBar                           |                   |                    |
| Frequency Range: 902.7-927.3 MHz       |               |                                 |                               |  |                   |                    |
| Notes:                                 |               |                                 |                               |  |                   |                    |
| Frequency (MHz)                        | Reading (dBm) | Attenuation (dB)                | Final Conducted Reading (dBm) | FCC 15.247                                   |                   |                    |
|  |               |                                 |                               | Limit (dBm)                                  | Margin (dB)       | Result (Pass/Fail) |
| 902.7                                  | -1.96         | 19.42                           | 17.46                         | 30.0   | -12.54            | Pass               |
| 915                                    | -3.46         | 19.42                           | 15.96                         | 30.0   | -14.04            | Pass               |
| 927.3                                  | -4.61         | 19.42                           | 14.81                         | 30.0   | -15.19            | Pass               |
| <b>Table Result:</b> Pass by -12.54 dB |               |                                 |                               | <b>Worst Freq:</b> 902.7 MHz                 |                   |                    |
| Test Site: CEM15                       |               | Attenuation: Asset#791          |                               |  |                   |                    |
| Analyzer: SA#1328                      |               |                                 |                               |  |                   |                    |
| Copyright Curtis-Straus LLC 2000       |               |                                 |                               |  |                   |                    |

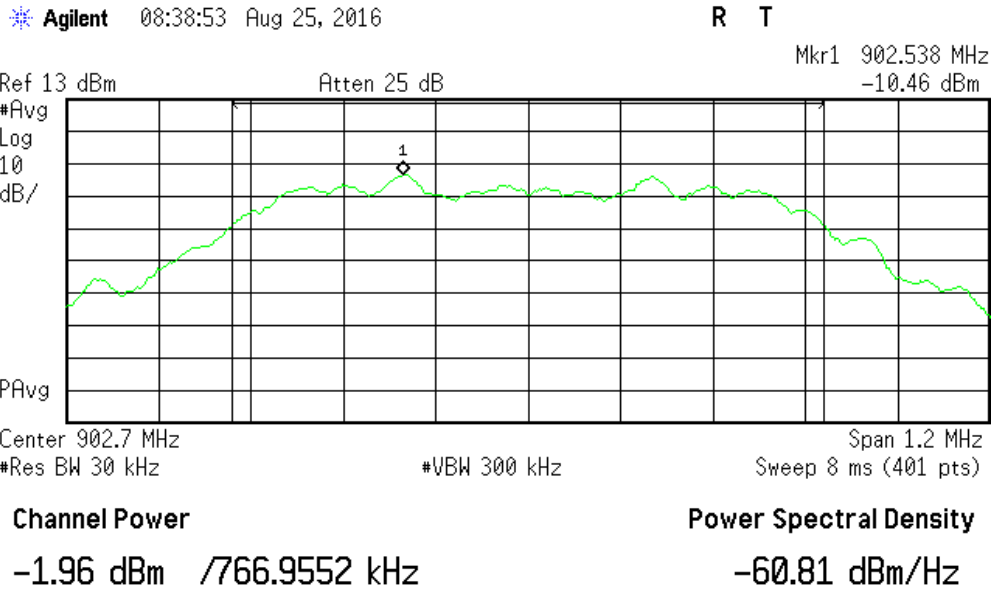
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| Spectrum Analyzers / Receivers / Preselectors | Range          | MN                       | Mfr        | SN              | Asset         | Cat                   | Calibration Due       | Calibrated on |  |
|---|----------------|--------------------------|------------|-----------------|---------------|-----------------------|-----------------------|---------------|--|
| SA EMI Chamber (1328)                         | 9kHz-13.2 GHz  | E4405B                   | Agilent    | MY44210241      | 1328          | I                     | 2/26/2017             | 2/26/2016     |  |
| Conducted Test Sites (Mains / Telco)          | FCC Code       | VCCI Code                | Cat        | Calibration Due | Calibrated on |                       |                       |               |  |
| CEMI 5  | 719150         | A-0015                   | III        | NA              | N/A           |                       |                       |               |  |
| Meteorological Meters                         | MN             | Mfr                      | SN         | Asset           | Cat           | Calibration Due       | Calibrated on         |               |  |
| Weather Clock (Pressure Only)<br>TH A#2085    | BA928<br>HTC-1 | Oregon Scientific<br>HDE | C3166-1    | 831<br>2085     | I<br>II       | 4/28/2018<br>4/5/2017 | 4/28/2016<br>4/5/2016 |               |  |
| Preamps / Couplers Attenuators / Filters      | Range          | MN                       | Mfr        | SN              | Asset         | Cat                   | Calibration Due       | Calibrated on |  |
| HF 20dB 50W Attenuator                        | 0.009-18 GHz   | PE 7019-20               | Pasternack | 1               | 791           | II                    | 8/14/2017             | 8/14/2016     |  |

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

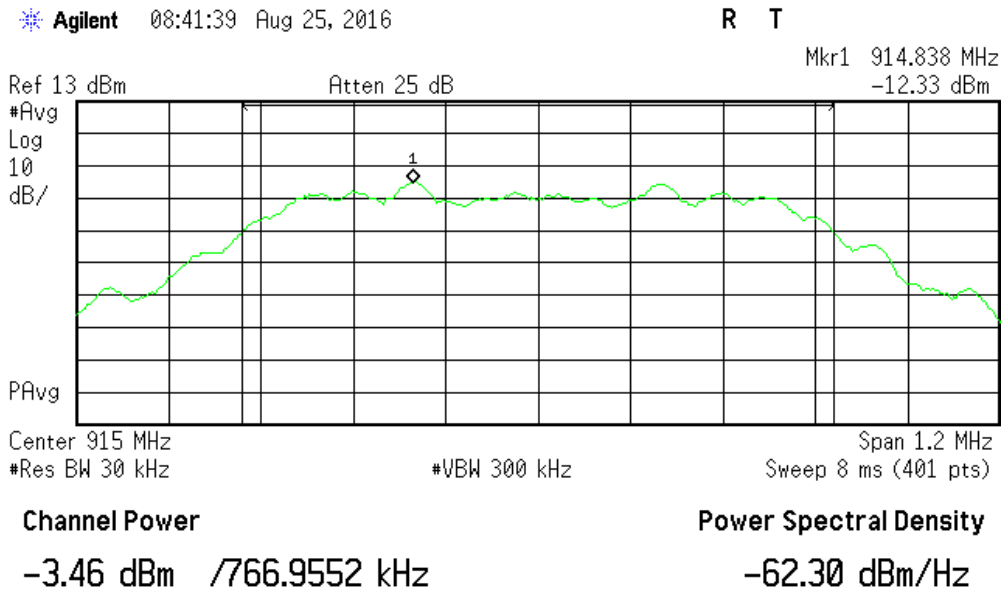


**PLOTS**



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Channel Power – Low Channel



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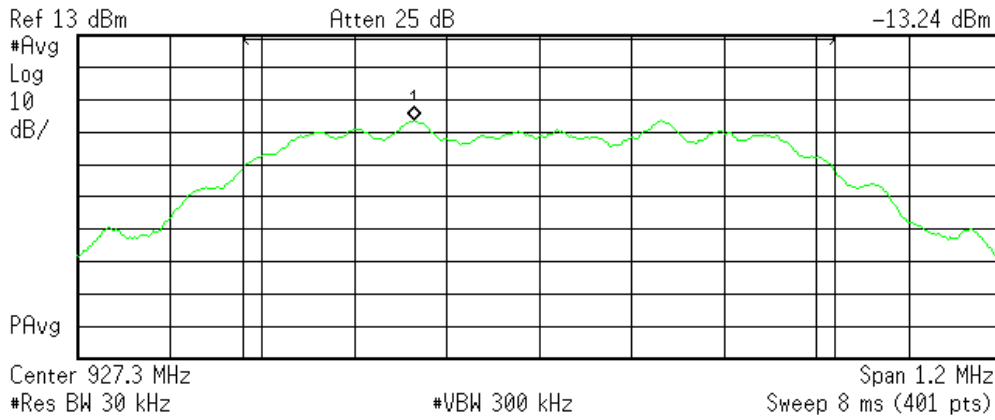
Channel Power – Mid Channel



Agilent 08:35:56 Aug 25, 2016

R T

Mkr1 927.138 MHz  
-13.24 dBm



Channel Power

Power Spectral Density

-4.61 dBm /766.9552 kHz

-63.46 dBm/Hz

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Channel Power – High Channel

## Radiated 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).  
[15.247(d)]

### MEASUREMENTS / RESULTS

| Spurious Conducted Emissions - Maximum In Band Peak PSD in 100 KHz RBW |               |                                 |                        |
|--|---------------|---------------------------------|------------------------|
| Date: 25-Aug-16  |               | Company: Ideal Industries, Inc. |                        |
| Engineer: Tuyen Truong   |               | EUT Desc: SCD1000               |                        |
| Temp: 23.4°C   |               | Humidity: 50%                   |                        |
|  |               | Pressure: 1010mBar              |                        |
| Work Order: Q2569  |               |                                 |                        |
| EUT Operating Voltage/Frequency: 120Vac/60Hz                           |               |                                 |                        |
| Frequency Range: 902.7-927.3 MHz                                       |               |                                 |                        |
| Notes: Maximum In Band Peak PSD in 100 KHz RBW                         |               |                                 |                        |
| Frequency (MHz)  | Reading (dBm) | Attenuation (dB)                | Adjusted Reading (dBm) |
| 902.7  | -1.043        | 19.42                           | 18.4                   |
| Test Site: CEMI5   |               | Attenuation: Asset#791          |                        |
| Analyzer: SA#1328  |               |                                 |                        |
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| Spectrum Analyzers / Receivers / Preselectors | Range         | MN         | Mfr               | SN         | Asset | Cat | Calibration Due | Calibrated on |
|---|---------------|------------|-------------------|------------|-------|-----|-----------------|---------------|
| SA EMI Chamber (1328)                         | 9kHz-13.2 GHz | E4405B     | Agilent           | MY44210241 | 1328  | I   | 2/26/2017       | 2/26/2016     |
| Conducted Test Sites (Mains / Telco)          | FCC Code      | VCCI Code  |                   |            |       | Cat | Calibration Due | Calibrated on |
| CEMI 5  | 719150        | A-0015     |                   |            |       | III | NA              | N/A           |
| 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#2085                                     |               | HTC-1      | HDE               |            | 2085  | II  | 4/5/2017        | 4/5/2016      |
| Preamps / Couplers Attenuators / Filters      | Range         | MN         | Mfr               | SN         | Asset | Cat | Calibration Due | Calibrated on |
| HF 20dB 50W Attenuator                        | 0.009-18 GHz  | PE 7019-20 | Pasternack        | 1          | 791   | II  | 8/14/2017       | 8/14/2016     |

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



| Radiated Emissions Table - FCC 15.247(d) - non restricted band   |                 |                |                                 |                       |                   |                           |  |             |                    |                  |             |                    |
|--|-----------------|----------------|---------------------------------|-----------------------|-------------------|---------------------------|--|-------------|--------------------|------------------|-------------|--------------------|
| Date: 08-Aug-16  |                 |                | Company: Ideal Industries, Inc. |                       |                   |                           | Work Order: Q2569                          |             |                    |                  |             |                    |
| Engineer: Zachary Johnson  |                 |                | EUT Desc: SCD1000               |                       |                   |                           | EUT Operating Voltage/Frequency: 120V/60Hz |             |                    |                  |             |                    |
| Temp: 22.6°C   |                 |                | Humidity: 50%                   |                       |                   |                           | Pressure: 1010mBar                         |             |                    |                  |             |                    |
| Frequency Range: 30-1000MHz  |                 |                |                                 |                       |                   |                           | Measurement Distance: 3 m                  |             |                    |                  |             |                    |
| Notes: All 3 channels (Low, Mid and High) were investigated and only the worst case recorded. EUT TX Freq: 902.7 to 927.3 MHz  |                 |                |                                 |                       |                   |                           |  |             |                    |                  |             |                    |
| Adjusted FS readings compared to Peak Power Spectral Density (worst case) including the 4.55dBi Antenna gain with the limit being 30dB below which corresponds to 88.2dBµV/m |                 |                |                                 |                       |                   |                           |  |             |                    |                  |             |                    |
| Antenna Polarization (H/V)   | Frequency (MHz) | Reading (dBµV) | Preamp Factor (dB)              | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Reading (dBµV/m) | ---  |             |                    | FCC 15.247 (d)   |             |                    |
|  |                 |                |                                 |                       |                   |                           | Limit (dBµV/m)                             | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m)   | Margin (dB) | Result (Pass/Fail) |
| V  | 41.2            | 50.4           | 22.4                            | 13.2                  | 0.4               | 41.6                      | ---  | ---         | ---                | 88.2             | -46.6       | Pass               |
| V  | 54.2            | 47.7           | 22.5                            | 7.5                   | 0.5               | 33.2                      | ---  | ---         | ---                | 88.2             | -55.0       | Pass               |
| H  | 76.4            | 32.3           | 22.4                            | 8.8                   | 0.6               | 19.3                      | ---  | ---         | ---                | 88.2             | -68.9       | Pass               |
| V  | 80.7            | 43.3           | 22.5                            | 8.0                   | 0.6               | 29.4                      | ---  | ---         | ---                | 88.2             | -58.8       | Pass               |
| V  | 207.5           | 43.4           | 22.5                            | 11.0                  | 0.9               | 32.8                      | ---  | ---         | ---                | 88.2             | -55.4       | Pass               |
| H  | 800.3           | 34.5           | 22.4                            | 21.3                  | 2.2               | 35.6                      | ---  | ---         | ---                | 88.2             | -52.6       | Pass               |
| H  | 75.59           | 42.4           | 22.4                            | 9.0                   | 0.6               | 29.6                      | ---  | ---         | ---                | 88.2             | -58.6       | Pass               |
| H  | 821.52          | 36.5           | 22.3                            | 21.7                  | 2.2               | 38.1                      | ---  | ---         | ---                | 88.2             | -50.1       | Pass               |
| H  | 80.44           | 41.4           | 22.5                            | 8.1                   | 0.6               | 27.6                      | ---  | ---         | ---                | 88.2             | -60.6       | Pass               |
| H  | 799.21          | 37.6           | 22.4                            | 21.3                  | 2.1               | 38.6                      | ---  | ---         | ---                | 88.2             | -49.6       | Pass               |
| H  | 77.53           | 42.6           | 22.4                            | 8.6                   | 0.6               | 29.4                      | ---  | ---         | ---                | 88.2             | -58.8       | Pass               |
| H  | 799.21          | 40.1           | 22.4                            | 21.3                  | 2.1               | 41.1                      | ---  | ---         | ---                | 88.2             | -47.1       | Pass               |
| <b>Table Result:</b> Pass by -46.6 dB <b>Worst Freq:</b> 41.2 MHz  |                 |                |                                 |                       |                   |                           |  |             |                    |                  |             |                    |
| Test Site: EMI Chamber 2   |                 |                | Cable 1: Asset #2052            |                       |                   |                           | Cable 2: Asset #1507                       |             |                    | Cable 3: ---     |             |                    |
| Analyzer: Rental SA#1  |                 |                | Preamp: Blue                    |                       |                   |                           | Antenna: Red-Black                         |             |                    | Preselector: --- |             |                    |
| CSsoft Radiated Emissions Calculator v 1.017.169 Copyright Curtis-Straus LLC 2000  |                 |                |                                 |                       |                   |                           |  |             |                    |                  |             |                    |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor   |                 |                |                                 |                       |                   |                           |  |             |                    |                  |             |                    |

Note: No emissions found within 10dB of the limit, which was set -30dB down from the peak of Power Spectral Density of the Fundamental frequency (worst case). (See section 15.247(e) – Power Spectral Density) (i.e. Worst Case Conducted Power Spectral Density Reading + Antenna Gain = EIRP then calculated field strength based off of  $P = (Ed)^2/(30G)$ . Field Strength – 30dB = Adjusted Limit dBµV/m

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| 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             | 12/23/2016      | 12/23/2015    |
| 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 |                 | II            | 3/22/2017       | 3/22/2015     |
| Preamps/Couplers Attenuators / Filters      | Range         | MN          | Mfr               | SN         | Asset           | Cat           | Calibration Due | Calibrated on |
| Blue  | 0.009-2000MHz | ZFL-1000-LN | CS                | N/A        | 759             | II            | 5/13/2017       | 5/13/2016     |
| Antennas                                    | Range         | MN          | Mfr               | SN         | Asset           | Cat           | Calibration Due | Calibrated on |
| Red-Black Bilog                             | 30-2000MHz    | JB1         | Sunol             | A091604-2  | 1106            | I             | 2/9/2017        | 2/9/2015      |
| Meteorological Meters                       | Range         | 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#2081                                   |               | HTC-1       | HDE               |            | 2081            | II            | 4/5/2017        | 4/5/2016      |
| Cables                                      | Range         | Mfr         | Asset             | Cat        | Calibration Due | Calibrated on |                 |               |
| Asset #1507                                 | 9kHz - 18GHz  | Florida RF  |                   | II         | 2/14/2017       | 2/14/2016     |                 |               |
| Asset #2052                                 | 9kHz - 18GHz  | Florida RF  |                   | II         | 3/2/2017        | 3/2/2016      |                 |               |

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



**Radiated Emissions Table - FCC 15.247(d) - restricted band**

| <b>Date:</b> 08-Aug-16   |                 | <b>Company:</b> Ideal Industries, Inc. |                    |                           |                             | <b>Work Order:</b> Q2569                          |                |                              |                    |                |             |                    |
|--|-----------------|--|--------------------|---------------------------|-----------------------------|---|----------------|------------------------------|--------------------|----------------|-------------|--------------------|
| <b>Engineer:</b> Zachary Johnson   |                 | <b>EUT Desc:</b> SCD1000               |                    |                           |                             | <b>EUT Operating Voltage/Frequency:</b> 120V/60Hz |                |                              |                    |                |             |                    |
| <b>Temp:</b> 22.6°C  |                 | <b>Humidity:</b> 50%                   |                    | <b>Pressure:</b> 1010mBar |                             |   |                |                              |                    |                |             |                    |
| <b>Frequency Range:</b> 30-1000MHz   |                 |  |                    |                           |                             | <b>Measurement Distance:</b> 3 m                  |                |                              |                    |                |             |                    |
| <b>Notes:</b> All 3 channels (Low, Mid and High) were investigated and only the worst case recorded. |                 |  |                    |                           |                             | <b>EUT TX Freq:</b> 902.7 to 927.3 MHz            |                |                              |                    |                |             |                    |
| Antenna Polarization (H/V)   | Frequency (MHz) | Reading (dBµV)                         | Preamp Factor (dB) | Antenna Factor (dB/m)     | Cable Factor (dB)           | Adjusted Reading (dBµV/m)                         | ---            |                              |                    | FCC 15.209     |             |                    |
|  |                 |  |                    |                           |                             |   | Limit (dBµV/m) | Margin (dB)                  | Result (Pass/Fail) | Limit (dBµV/m) | Margin (dB) | Result (Pass/Fail) |
| H  | 270.0           | 33.9                                   | 22.6               | 13.2                      | 1.2                         | 25.7  | ---            | ---                          | ---                | 46.0           | -20.3       | Pass               |
| H  | 329.4           | 40.7                                   | 22.4               | 14.0                      | 1.3                         | 33.6  | ---            | ---                          | ---                | 46.0           | -12.4       | Pass               |
| H  | 332.64          | 45.1                                   | 22.4               | 14.1                      | 1.3                         | 38.1  | ---            | ---                          | ---                | 46.0           | -7.9        | Pass               |
| H  | 330.7           | 46.2                                   | 22.4               | 14.0                      | 1.3                         | 39.1  | ---            | ---                          | ---                | 46.0           | -6.9        | Pass               |
| <b>Table Result:</b> Pass  |                 |  |                    |                           |                             | by -6.9 dB  |                | <b>Worst Freq:</b> 330.7 MHz |                    |                |             |                    |
| <b>Test Site:</b> EMI Chamber 2  |                 | <b>Cable 1:</b> Asset #2052            |                    |                           | <b>Cable 2:</b> Asset #1507 |   |                | <b>Cable 3:</b> ---          |                    |                |             |                    |
| <b>Analyzer:</b> Rental SA#1   |                 | <b>Preamp:</b> Blue                    |                    |                           | <b>Antenna:</b> Red-Black   |   |                | <b>Preselector:</b> ---      |                    |                |             |                    |
| CSsoft Radiated Emissions Calculator v 1.017.169   |                 |  |                    |                           |                             | Copyright Curtis-Straus LLC 2000                  |                |                              |                    |                |             |                    |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor                           |                 |  |                    |                           |                             |   |                |                              |                    |                |             |                    |

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|  |                 |                   |                  |                        |                      |                        |                        |                      |
|--|-----------------|-------------------|------------------|------------------------|----------------------|------------------------|------------------------|----------------------|
| <b>Spectrum Analyzers / Receivers/Preselectors</b> | <b>Range</b>    | <b>MN</b>         | <b>Mfr</b>       | <b>SN</b>              | <b>Asset</b>         | <b>Cat</b>             | <b>Calibration Due</b> | <b>Calibrated on</b> |
| SA #2 (1860)                                       | 9kHz-26.5 GHz   | E7405A            | Agilent          | MY45104916             | 1860                 | I                      | 12/23/2016             | 12/23/2015           |
| <b>Radiated Emissions Sites</b>                    | <b>FCC Code</b> | <b>IC Code</b>    | <b>VCCI Code</b> | <b>Range</b>           | <b>Cat</b>           | <b>Calibration Due</b> | <b>Calibrated on</b>   |                      |
| EMI Chamber 2                                      | 719150          | 2762A-7           | A-0015           | 30-1000MHz             | II                   | 3/22/2017              | 3/22/2015              |                      |
| <b>Preamps/Couplers Attenuators / Filters</b>      | <b>Range</b>    | <b>MN</b>         | <b>Mfr</b>       | <b>SN</b>              | <b>Asset</b>         | <b>Cat</b>             | <b>Calibration Due</b> | <b>Calibrated on</b> |
| Blue   | 0.009-2000MHz   | ZFL-1000-LN       | CS               | N/A                    | 759                  | II                     | 5/13/2017              | 5/13/2016            |
| <b>Antennas</b>                                    | <b>Range</b>    | <b>MN</b>         | <b>Mfr</b>       | <b>SN</b>              | <b>Asset</b>         | <b>Cat</b>             | <b>Calibration Due</b> | <b>Calibrated on</b> |
| Red-Black Bilog                                    | 30-2000MHz      | JB1               | Sunol            | A091604-2              | 1106                 | I                      | 2/9/2017               | 2/9/2015             |
| <b>Meteorological Meters</b>                       | <b>MN</b>       | <b>Mfr</b>        | <b>SN</b>        | <b>Asset</b>           | <b>Cat</b>           | <b>Calibration Due</b> | <b>Calibrated on</b>   |                      |
| Weather Clock (Pressure Only)                      | BA928           | Oregon Scientific | C3166-1          | 831                    | I                    | 4/28/2018              | 4/28/2016              |                      |
| TH A#2081  | HTC-1           | HDE               |                  | 2081                   | II                   | 4/5/2017               | 4/5/2016               |                      |
| <b>Cables</b>                                      | <b>Range</b>    | <b>Mfr</b>        | <b>Cat</b>       | <b>Calibration Due</b> | <b>Calibrated on</b> |                        |                        |                      |
| Asset #1507  | 9kHz - 18GHz    | Florida RF        | II               | 2/14/2017              | 2/14/2016            |                        |                        |                      |
| Asset #2052  | 9kHz - 18GHz    | Florida RF        | II               | 3/2/2017               | 3/2/2016             |                        |                        |                      |

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

**Radiated Emissions Table**

| <b>Date:</b> 25-Aug-16   |                 | <b>Company:</b> Ideal Industries, Inc. |                    |                           |                             | <b>Work Order:</b> Q2569                          |                |                               |                    |
|--|-----------------|--|--------------------|---------------------------|-----------------------------|---|----------------|-------------------------------|--------------------|
| <b>Engineer:</b> Zachary Johnson   |                 | <b>EUT Desc:</b> SCD1000               |                    |                           |                             | <b>EUT Operating Voltage/Frequency:</b> 120V/60Hz |                |                               |                    |
| <b>Temp:</b> 22.6°C  |                 | <b>Humidity:</b> 50%                   |                    | <b>Pressure:</b> 1010mBar |                             |   |                |                               |                    |
| <b>Frequency Range:</b> 1-6GHz   |                 |  |                    |                           |                             | <b>Measurement Distance:</b> 3 m                  |                |                               |                    |
| <b>Notes:</b> TX on Low channel  |                 |  |                    |                           |                             | <b>EUT TX Freq:</b> 902.7 to 927.3 MHz            |                |                               |                    |
| Limit is set at 30dB below the fundamental                                 |                 |  |                    |                           |                             |   |                |                               |                    |
| Antenna Polarization (H/V)   | Frequency (MHz) | Peak Reading (dBµV)                    | Preamp Factor (dB) | Antenna Factor (dB/m)     | Cable Factor (dB)           | Adjusted Peak Reading (dBµV/m)                    | FCC 15.247(d)  |                               |                    |
|  |                 |  |                    |                           |                             |   | Limit (dBµV/m) | Margin (dB)                   | Result (Pass/Fail) |
| H  | 5508            | 34.1                                   | 18.2               | 34.8                      | 5.5                         | 56.2  | 88.2           | -32.0                         | Pass               |
| V  | 5656            | 34.6                                   | 18.4               | 35                        | 5.6                         | 56.8  | 88.2           | -31.4                         | Pass               |
| <b>Table Result:</b> Pass  |                 |  |                    |                           |                             | by -31.4 dB                                       |                | <b>Worst Freq:</b> 5656.0 MHz |                    |
| <b>Test Site:</b> EMI Chamber 2  |                 | <b>Cable 1:</b> Asset #2052            |                    |                           | <b>Cable 2:</b> Asset #1507 |   |                | <b>Cable 3:</b> ---           |                    |
| <b>Analyzer:</b> Rental SA#1   |                 | <b>Preamp:</b> Asset #1517             |                    |                           | <b>Antenna:</b> Blue Horn   |   |                | <b>Preselector:</b> ---       |                    |
| CSsoft Radiated Emissions Calculator v 1.017.169                           |                 |  |                    |                           |                             | Copyright Curtis-Straus LLC 2000                  |                |                               |                    |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor |                 |  |                    |                           |                             |   |                |                               |                    |

**Radiated Emissions Table**

| <b>Date:</b> 25-Aug-16   |                 | <b>Company:</b> Ideal Industries, Inc. |                    |                           |                             | <b>Work Order:</b> Q2569                          |                |                               |                    |
|--|-----------------|--|--------------------|---------------------------|-----------------------------|---|----------------|-------------------------------|--------------------|
| <b>Engineer:</b> Zachary Johnson   |                 | <b>EUT Desc:</b> SCD1000               |                    |                           |                             | <b>EUT Operating Voltage/Frequency:</b> 120V/60Hz |                |                               |                    |
| <b>Temp:</b> 22.6°C  |                 | <b>Humidity:</b> 50%                   |                    | <b>Pressure:</b> 1010mBar |                             |   |                |                               |                    |
| <b>Frequency Range:</b> 1-6GHz   |                 |  |                    |                           |                             | <b>Measurement Distance:</b> 3 m                  |                |                               |                    |
| <b>Notes:</b> TX on Mid channel  |                 |  |                    |                           |                             | <b>EUT TX Freq:</b> 902.7 to 927.3 MHz            |                |                               |                    |
| Limit is set at 30dB below the fundamental                                 |                 |  |                    |                           |                             |   |                |                               |                    |
| Antenna Polarization (H/V)   | Frequency (MHz) | Peak Reading (dBµV)                    | Preamp Factor (dB) | Antenna Factor (dB/m)     | Cable Factor (dB)           | Adjusted Peak Reading (dBµV/m)                    | FCC 15.247(d)  |                               |                    |
|  |                 |  |                    |                           |                             |   | Limit (dBµV/m) | Margin (dB)                   | Result (Pass/Fail) |
| H  | 1990.0          | 34.1                                   | 20.1               | 31.7                      | 3.4                         | 49.1  | 88.2           | -39.1                         | Pass               |
| V  | 5714.0          | 34.6                                   | 18.4               | 35.1                      | 5.6                         | 56.9  | 88.2           | -31.3                         | Pass               |
| <b>Table Result:</b> Pass  |                 |  |                    |                           |                             | by -31.3 dB                                       |                | <b>Worst Freq:</b> 5714.0 MHz |                    |
| <b>Test Site:</b> EMI Chamber 2  |                 | <b>Cable 1:</b> Asset #2052            |                    |                           | <b>Cable 2:</b> Asset #1507 |   |                | <b>Cable 3:</b> ---           |                    |
| <b>Analyzer:</b> Rental SA#1   |                 | <b>Preamp:</b> Asset #1517             |                    |                           | <b>Antenna:</b> Blue Horn   |   |                | <b>Preselector:</b> ---       |                    |
| CSsoft Radiated Emissions Calculator v 1.017.169                           |                 |  |                    |                           |                             | Copyright Curtis-Straus LLC 2000                  |                |                               |                    |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor |                 |  |                    |                           |                             |   |                |                               |                    |



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| Radiated Emissions Table   |                 |                     |                                 |                       |                   |  |                        |             |                           |                    |  |
|--|-----------------|---------------------|---------------------------------|-----------------------|-------------------|--|------------------------|-------------|---------------------------|--------------------|--|
| Date: 25-Aug-16  |                 |                     | Company: Ideal Industries, Inc. |                       |                   | Work Order: Q2569                          |                        |             |                           |                    |  |
| Engineer: Zachary Johnson  |                 |                     | EUT Desc: SCD1000               |                       |                   | EUT Operating Voltage/Frequency: 120V/60Hz |                        |             |                           |                    |  |
| Temp: 22.6°C   |                 |                     | Humidity: 50%                   |                       |                   | Pressure: 1010mBar                         |                        |             | Measurement Distance: 3 m |                    |  |
| Frequency Range: 1-6GHz  |                 |                     |                                 |                       |                   | EUT TX Freq: 902.7 to 927.3 MHz            |                        |             |                           |                    |  |
| Notes: TX on High channel<br>Limit is set at 30dB below the fundamental    |                 |                     |                                 |                       |                   |  |                        |             |                           |                    |  |
| Antenna Polarization (H/V)   | Frequency (MHz) | Peak Reading (dBµV) | Preamp Factor (dB)              | Antenna Factor (dB/m) | Cable Factor (dB) | Adjusted Peak Reading (dBµV/m)             | FCC 15.247(d)          |             |                           | Result (Pass/Fail) |  |
| H  | 1082.0          | 34.9                | 21.2                            | 28.5                  | 2.5               | 44.7                                       | Limit (dBµV/m)         | Margin (dB) |                           |                    |  |
| V  | 2411.0          | 40.4                | 20.9                            | 32.3                  | 3.6               | 55.4                                       | 88.2                   | -43.5       | Pass                      |                    |  |
| Table Result: Pass by -32.8 dB   |                 |                     |                                 |                       |                   |  | Worst Freq: 2411.0 MHz |             |                           |                    |  |
| Test Site: EMI Chamber 2   |                 |                     | Cable 1: Asset #2052            |                       |                   | Cable 2: Asset #1507                       |                        |             | Cable 3: ---              |                    |  |
| Analyzer: Rental SA#1  |                 |                     | Preamp: Asset #1517             |                       |                   | Antenna: Blue Horn                         |                        |             | Preselector: ---          |                    |  |
| CSsoft Radiated Emissions Calculator v 1.017.169                           |                 |                     |                                 |                       |                   | Copyright Curtis-Straus LLC 2000           |                        |             |                           |                    |  |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor |                 |                     |                                 |                       |                   |  |                        |             |                           |                    |  |

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| Spectrum Analyzers / Receivers /Preselectors | Range          | MN                | Mfr           | SN              | Asset         | Cat             | Calibration Due | Calibrated on |
|--|----------------|-------------------|---------------|-----------------|---------------|-----------------|-----------------|---------------|
| Brown  | 9kHz-26.5GHz   | E4407B            | Agilent       | SG44210511      | 1510          | I               | 1/21/2017       | 1/21/2016     |
| Radiated Emissions Sites                     | FCC Code       | IC Code           | VCCI Code     | Range           | Cat           | Calibration Due | Calibrated on   |               |
| EMI Chamber 2                                | 719150         | 2762A-7           | A-0015        | 30-1000MHz      | II            | 3/22/2017       | 3/22/2015       |               |
| Preamps / Couplers Attenuators / Filters     | Range          | MN                | Mfr           | SN              | Asset         | Cat             | Calibration Due | Calibrated on |
| 1517 HF Preamp                               | 1-20GHz        | CS                | CS            | N/A             | 1517          | II              | 8/14/2017       | 8/14/2016     |
| 2130 BRF                                     | 0.009-18000MHz | BRM18770          | Micro-Tronics | 1               | 2130          | II              | 1/6/2017        | 1/6/2016      |
| Antennas                                     | Range          | MN                | Mfr           | SN              | Asset         | Cat             | Calibration Due | Calibrated on |
| Blue Horn                                    | 1-18Ghz        | 3117              | ETS           | 157647          | 1861          | I               | 2/8/2017        | 2/8/2015      |
| 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#2081                                    | HTC-1          | HDE               |               | 2081            | II            | 4/5/2017        | 4/5/2016        |               |
| Cables                                       | Range          | Mfr               | Cat           | Calibration Due | Calibrated on |                 |                 |               |
| Asset #1507                                  | 9kHz - 18GHz   | Florida RF        | II            | 2/14/2017       | 2/14/2016     |                 |                 |               |
| Asset #2052                                  | 9kHz - 18GHz   | Florida RF        | II            | 3/2/2017        | 3/2/2016      |                 |                 |               |

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

| Radiated Emissions Table   |                 |                     |                                 |                    |                       |  |                                |                               |                                  |             |                    |                                     |             |                    |
|--|-----------------|---------------------|---------------------------------|--------------------|-----------------------|--|--------------------------------|-------------------------------|----------------------------------|-------------|--------------------|-------------------------------------|-------------|--------------------|
| Date: 29-Aug-16  |                 |                     | Company: Ideal Industries, Inc. |                    |                       | Work Order: Q2569                          |                                |                               |                                  |             |                    |                                     |             |                    |
| Engineer: Chris Bramley  |                 |                     | EUT Desc: SCD1000               |                    |                       | EUT Operating Voltage/Frequency: 120V/60Hz |                                |                               |                                  |             |                    |                                     |             |                    |
| Temp: 24.5°C   |                 |                     | Humidity: 40%                   |                    |                       | Pressure: 1010mBar                         |                                |                               | Measurement Distance: 1 m        |             |                    |                                     |             |                    |
| Frequency Range: 6-10GHz   |                 |                     |                                 |                    |                       | EUT Max Freq: 927.3MHz                     |                                |                               |                                  |             |                    |                                     |             |                    |
| Notes: EUT Tx at 902.7MHz.   |                 |                     |                                 |                    |                       |  |                                |                               |                                  |             |                    |                                     |             |                    |
| Antenna Polarization (H/V)   | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV)          | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB)                          | Adjusted Peak Reading (dBµV/m) | Adjusted Avg Reading (dBµV/m) | FCC 15.209 High Frequency - Peak |             |                    | FCC 15.209 High Frequency - Average |             |                    |
| h  | 6318.9          | 34.09               | 24.3                            | 16.2               | 35.8                  | 8.0  | 61.7                           | 51.9                          | Limit (dBµV/m)                   | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m)                      | Margin (dB) | Result (Pass/Fail) |
| v  | 7221.6          | 41.47               | 34.2                            | 15.9               | 35.9                  | 8.0  | 69.5                           | 62.2                          | 83.5                             | -14.0       | Pass               | 63.5                                | -1.3        | Pass               |
| v  | 8124.3          | 34.48               | 22.5                            | 15.9               | 36.1                  | 8.1  | 62.8                           | 50.8                          | 83.5                             | -20.7       | Pass               | 63.5                                | -12.7       | Pass               |
| h  | 9027.0          | 33.56               | 20.5                            | 15.8               | 36.6                  | 8.0  | 62.4                           | 49.3                          | 83.5                             | -21.1       | Pass               | 63.5                                | -14.2       | Pass               |
| Table Result: Pass by -1.3 dB  |                 |                     |                                 |                    |                       |  | Worst Freq: 7221.6 MHz         |                               |                                  |             |                    |                                     |             |                    |
| Test Site: EMI Chamber 1   |                 |                     | Cable 1: Asset #2051            |                    |                       | Cable 2: Asset #1784                       |                                |                               | Antenna: Blue Horn               |             |                    |                                     |             |                    |
| Analyzer: Rental SA#1  |                 |                     | Preamp: Brown                   |                    |                       |  |                                |                               |                                  |             |                    |                                     |             |                    |
| CSsoft Radiated Emissions Calculator v 1.017.170                           |                 |                     |                                 |                    |                       | Copyright Curtis-Straus LLC 2000           |                                |                               |                                  |             |                    |                                     |             |                    |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor |                 |                     |                                 |                    |                       |  |                                |                               |                                  |             |                    |                                     |             |                    |





| Radiated Emissions Table   |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     |                                  |                    |  |
|--|-----------------|---------------------|---------------------------------|--------------------|-----------------------|---------------------------|--|-------------------------------|----------------------------------|-------------|--------------------|-------------------------------------|----------------------------------|--------------------|--|
| Date: 29-Aug-16  |                 |                     | Company: Ideal Industries, Inc. |                    |                       |                           | Work Order: Q2569                          |                               |                                  |             |                    |                                     |                                  |                    |  |
| Engineer: Chris Bramley  |                 |                     | EUT Desc: SCD1000               |                    |                       |                           | EUT Operating Voltage/Frequency: 120V/60Hz |                               |                                  |             |                    |                                     |                                  |                    |  |
| Temp: 24.5°C   |                 |                     | Humidity: 40%                   |                    |                       |                           | Pressure: 1010mBar                         |                               |                                  |             |                    |                                     |                                  |                    |  |
| Frequency Range: 6-10GHz   |                 |                     |                                 |                    |                       | Measurement Distance: 1 m |  |                               |                                  |             |                    |                                     |                                  |                    |  |
| Notes: EUT Tx at 915MHz.   |                 |                     |                                 |                    |                       | EUT Max Freq: 927.3MHz    |  |                               |                                  |             |                    |                                     |                                  |                    |  |
| Antenna Polarization (H/V)   | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV)          | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB)         | Adjusted Peak Reading (dBµV/m)             | Adjusted Avg Reading (dBµV/m) | FCC 15.209 High Frequency - Peak |             |                    | FCC 15.209 High Frequency - Average |                                  |                    |  |
|  |                 |                     |                                 |                    |                       |                           |  |                               | Limit (dBµV/m)                   | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m)                      | Margin (dB)                      | Result (Pass/Fail) |  |
| h  | 6405.0          | 34.43               | 23.0                            | 16.0               | 35.8                  | 8.2                       | 62.4                                       | 51.0                          | 83.5                             | -21.1       | Pass               | 63.5                                | -12.5                            | Pass               |  |
| v  | 7320.0          | 37.47               | 28.3                            | 15.9               | 35.9                  | 7.7                       | 65.2                                       | 56.0                          | 83.5                             | -18.3       | Pass               | 63.5                                | -7.5                             | Pass               |  |
| v  | 8235.0          | 33.88               | 21.5                            | 16.0               | 36.1                  | 8.1                       | 62.1                                       | 49.7                          | 83.5                             | -21.4       | Pass               | 63.5                                | -13.8                            | Pass               |  |
| h  | 9150.0          | 31.95               | 19.2                            | 15.7               | 36.7                  | 8.0                       | 61.0                                       | 48.2                          | 83.5                             | -22.5       | Pass               | 63.5                                | -15.3                            | Pass               |  |
| <b>Table Result:</b> Pass by -7.5 dB                                       |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     | <b>Worst Freq:</b> 7320.0 MHz    |                    |  |
| Test Site: EMI Chamber 1   |                 |                     | Cable 1: Asset #2051            |                    |                       |                           | Cable 2: Asset #1784                       |                               |                                  |             |                    |                                     |                                  |                    |  |
| Analyzer: Rental SA#1  |                 |                     | Preamp: Brown                   |                    |                       |                           | Antenna: Blue Horn                         |                               |                                  |             |                    |                                     |                                  |                    |  |
| CSsoft Radiated Emissions Calculator v 1.017.170                           |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     | Copyright Curtis-Straus LLC 2000 |                    |  |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     |                                  |                    |  |

| Radiated Emissions Table   |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     |                                  |                    |  |
|--|-----------------|---------------------|---------------------------------|--------------------|-----------------------|---------------------------|--|-------------------------------|----------------------------------|-------------|--------------------|-------------------------------------|----------------------------------|--------------------|--|
| Date: 29-Aug-16  |                 |                     | Company: Ideal Industries, Inc. |                    |                       |                           | Work Order: Q2569                          |                               |                                  |             |                    |                                     |                                  |                    |  |
| Engineer: Chris Bramley  |                 |                     | EUT Desc: SCD1000               |                    |                       |                           | EUT Operating Voltage/Frequency: 120V/60Hz |                               |                                  |             |                    |                                     |                                  |                    |  |
| Temp: 24.5°C   |                 |                     | Humidity: 40%                   |                    |                       |                           | Pressure: 1010mBar                         |                               |                                  |             |                    |                                     |                                  |                    |  |
| Frequency Range: 6-10GHz   |                 |                     |                                 |                    |                       | Measurement Distance: 1 m |  |                               |                                  |             |                    |                                     |                                  |                    |  |
| Notes: EUT Tx at 927.3MHz  |                 |                     |                                 |                    |                       | EUT Max Freq: 927.3MHz    |  |                               |                                  |             |                    |                                     |                                  |                    |  |
| Antenna Polarization (H/V)   | Frequency (MHz) | Peak Reading (dBµV) | Average Reading (dBµV)          | Preamp Factor (dB) | Antenna Factor (dB/m) | Cable Factor (dB)         | Adjusted Peak Reading (dBµV/m)             | Adjusted Avg Reading (dBµV/m) | FCC 15.209 High Frequency - Peak |             |                    | FCC 15.209 High Frequency - Average |                                  |                    |  |
|  |                 |                     |                                 |                    |                       |                           |  |                               | Limit (dBµV/m)                   | Margin (dB) | Result (Pass/Fail) | Limit (dBµV/m)                      | Margin (dB)                      | Result (Pass/Fail) |  |
| h  | 6491.1          | 33.78               | 22.5                            | 16.1               | 35.8                  | 7.2                       | 60.7                                       | 49.4                          | 83.5                             | -22.8       | Pass               | 63.5                                | -14.1                            | Pass               |  |
| v  | 7418.4          | 35.96               | 25.5                            | 15.9               | 36.0                  | 7.9                       | 64.0                                       | 53.5                          | 83.5                             | -19.5       | Pass               | 63.5                                | -10.0                            | Pass               |  |
| v  | 8345.7          | 33.12               | 19.5                            | 16.0               | 36.1                  | 8.2                       | 61.4                                       | 47.8                          | 83.5                             | -22.1       | Pass               | 63.5                                | -15.7                            | Pass               |  |
| h  | 9273.0          | 32.28               | 18.9                            | 15.6               | 36.8                  | 8.6                       | 62.1                                       | 48.7                          | 83.5                             | -21.4       | Pass               | 63.5                                | -14.8                            | Pass               |  |
| <b>Table Result:</b> Pass by -10.0 dB                                      |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     | <b>Worst Freq:</b> 7418.4 MHz    |                    |  |
| Test Site: EMI Chamber 1   |                 |                     | Cable 1: Asset #2051            |                    |                       |                           | Cable 2: Asset #1784                       |                               |                                  |             |                    |                                     |                                  |                    |  |
| Analyzer: Rental SA#1  |                 |                     | Preamp: Brown                   |                    |                       |                           | Antenna: Blue Horn                         |                               |                                  |             |                    |                                     |                                  |                    |  |
| CSsoft Radiated Emissions Calculator v 1.017.170                           |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     | Copyright Curtis-Straus LLC 2000 |                    |  |
| Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor |                 |                     |                                 |                    |                       |                           |  |                               |                                  |             |                    |                                     |                                  |                    |  |

| Rev. 8/29/2016                                       |  |                 |                |                   |              |              |            |                        |                      |  |
|--|--|-----------------|----------------|-------------------|--------------|--------------|------------|------------------------|----------------------|--|
| <b>Spectrum Analyzers / Receivers / Preselectors</b> |  | <b>Range</b>    | <b>MN</b>      | <b>Mfr</b>        | <b>SN</b>    | <b>Asset</b> | <b>Cat</b> | <b>Calibration Due</b> | <b>Calibrated on</b> |  |
| Brown  |  | 9kHz-26.5GHz    | E4407B         | Agilent           | SG44210511   | 1510         | I          | 1/21/2017              | 1/21/2016            |  |
| <b>Radiated Emissions Sites</b>                      |  | <b>FCC Code</b> | <b>IC Code</b> | <b>VCCI Code</b>  | <b>Range</b> |              | <b>Cat</b> | <b>Calibration Due</b> | <b>Calibrated on</b> |  |
| EMI Chamber 1  |  | 719150          | 2762A-6        | A-0015            | 30-1000MHz   |              | II         | 3/21/2017              | 3/21/2015            |  |
| <b>Preamps / Couplers Attenuators / Filters</b>      |  | <b>Range</b>    | <b>MN</b>      | <b>Mfr</b>        | <b>SN</b>    | <b>Asset</b> | <b>Cat</b> | <b>Calibration Due</b> | <b>Calibrated on</b> |  |
| Brown  |  | 1-10GHz         | CS             | CS                | N/A          | 1523         | II         | 10/8/2016              | 10/8/2015            |  |
| <b>Antennas</b>                                      |  | <b>Range</b>    | <b>MN</b>      | <b>Mfr</b>        | <b>SN</b>    | <b>Asset</b> | <b>Cat</b> | <b>Calibration Due</b> | <b>Calibrated on</b> |  |
| Blue Horn  |  | 1-18Ghz         | 3117           | ETS               | 157647       | 1861         | I          | 2/8/2017               | 2/8/2015             |  |
| <b>Meteorological Meters</b>                         |  |                 | <b>MN</b>      | <b>Mfr</b>        | <b>SN</b>    | <b>Asset</b> | <b>Cat</b> | <b>Calibration Due</b> | <b>Calibrated on</b> |  |
| Weather Clock (Pressure Only)                        |  |                 | BA928          | Oregon Scientific | C3166-1      | 831          | I          | 4/28/2018              | 4/28/2016            |  |
| TH A#2080  |  |                 | HTC-1          | HDE               |              | 2080         | II         | 4/5/2017               | 4/5/2016             |  |
| <b>Cables</b>  |  | <b>Range</b>    |                | <b>Mfr</b>        |              |              | <b>Cat</b> | <b>Calibration Due</b> | <b>Calibrated on</b> |  |
| Asset #1784  |  | 9kHz - 18GHz    |                | Florida RF        |              |              | II         | 3/7/2017               | 3/7/2016             |  |
| Asset #2051  |  | 9kHz - 18GHz    |                | Florida RF        |              |              | II         | 3/2/2017               | 3/2/2016             |  |

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



## 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 based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB ...

[15.247(d)]

### MEASUREMENTS / RESULTS

| Spurious Conducted Emissions - Maximum In Band Peak PSD in 100 KHz RBW |               |                                 |                        |
|--|---------------|---------------------------------|------------------------|
| Date: 25-Aug-16  |               | Company: Ideal Industries, Inc. |                        |
| Engineer: Tuyen Truong   |               | EUT Desc: SCD1000               |                        |
| Temp: 23.4°C   |               | Humidity: 50%                   |                        |
|  |               | Pressure: 1010mBar              |                        |
| Work Order: Q2569  |               |                                 |                        |
| EUT Operating Voltage/Frequency: 120Vac/60Hz                           |               |                                 |                        |
| Frequency Range: 902.7-927.3 MHz                                       |               |                                 |                        |
| Notes: Maximum In Band Peak PSD in 100 KHz RBW                         |               |                                 |                        |
| Frequency (MHz)  | Reading (dBm) | Attenuation (dB)                | Adjusted Reading (dBm) |
| 902.7  | -1.043        | 19.42                           | 18.4                   |
| Test Site: CEM15   |               | Attenuation: Asset#791          |                        |
| Analyzer: SA#1328  |               |                                 |                        |
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| Band Edge  |               |                                 |                               |                              |  |                    |
|--|---------------|---------------------------------|-------------------------------|------------------------------|--|--------------------|
| Date: 25-Aug-16  |               | Company: Ideal Industries, Inc. |                               |                              | Work Order: Q2569                            |                    |
| Engineer: Tuyen Truong   |               | EUT Desc: SCD1000               |                               |                              | EUT Operating Voltage/Frequency: 120Vac/60Hz |                    |
| Temp: 23.4°C   |               | Humidity: 50%                   |                               |                              | Pressure: 1010mBar                           |                    |
| Frequency Range: 902.7-927.3 MHz   |               |                                 |                               |                              |  |                    |
| Notes:<br>The Limit here is set to -30dB from the max in-band peak PSD level in 100kHz RBW (Attenuation factor included or 19.42dBm) |               |                                 |                               |                              |  |                    |
| Frequency (MHz)  | Reading (dBm) | Attenuation (dB)                | Final Conducted Reading (dBm) | FCC 15.247                   |  |                    |
|  |               |                                 |                               | Limit (dBm)                  | Margin (dB)                                  | Result (Pass/Fail) |
| 902.0  | -37.58        | 19.42                           | -18.16                        | -11.60                       | -6.56  | Pass               |
| 928.0  | -43.22        | 19.42                           | -23.80                        | -11.60                       | -12.20                                       | Pass               |
| <b>Table Result:</b> Pass by -6.56 dB  |               |                                 |                               | <b>Worst Freq:</b> 902.0 MHz |  |                    |
| Test Site: CEM15   |               | Attenuation: Asset#791          |                               |                              |  |                    |
| Analyzer: SA#1328  |               |                                 |                               |                              |  |                    |
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Rev. 8/21/2016

| Spectrum Analyzers / Receivers / Preselectors | Range         | MN                | Mfr        | SN              | Asset         | Cat             | Calibration Due | Calibrated on |  |
|---|---------------|-------------------|------------|-----------------|---------------|-----------------|-----------------|---------------|--|
| SA EMI Chamber (1328)                         | 9kHz-13.2 GHz | E4405B            | Agilent    | MY44210241      | 1328          | I               | 2/26/2017       | 2/26/2016     |  |
| Conducted Test Sites (Mains / Telco)          | FCC Code      | VCCI Code         | Cat        | Calibration Due | Calibrated on |                 |                 |               |  |
| CEM15   | 719150        | A-0015            | III        | NA              | N/A           |                 |                 |               |  |
| 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#2085                                     | HTC-1         | HDE               |            | 2085            | II            | 4/5/2017        | 4/5/2016        |               |  |
| Preamps / Couplers Attenuators / Filters      | Range         | MN                | Mfr        | SN              | Asset         | Cat             | Calibration Due | Calibrated on |  |
| HF 20dB 50W Attenuator                        | 0.009-18 GHz  | PE 7019-20        | Pasternack | 1               | 791           | II              | 8/14/2017       | 8/14/2016     |  |

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



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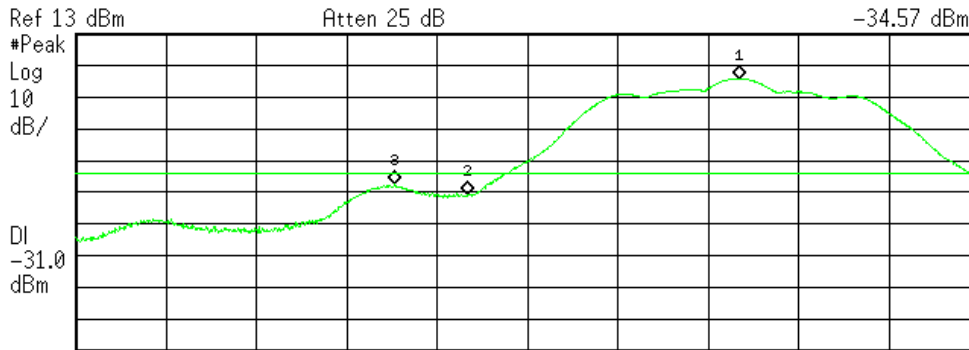
Plots

Conducted Band Edge

Agilent 10:58:35 Aug 25, 2016

R T

Mkr3 901.8119 MHz  
-34.57 dBm



Start 901 MHz Stop 903.3 MHz  
#Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts)

| Marker | Trace | Type | X Axis       | Amplitude  |
|--------|-------|------|--------------|------------|
| 1      | (1)   | Freq | 902.6882 MHz | -1.144 dBm |
| 2      | (1)   | Freq | 902.0000 MHz | -37.58 dBm |
| 3      | (1)   | Freq | 901.8119 MHz | -34.57 dBm |

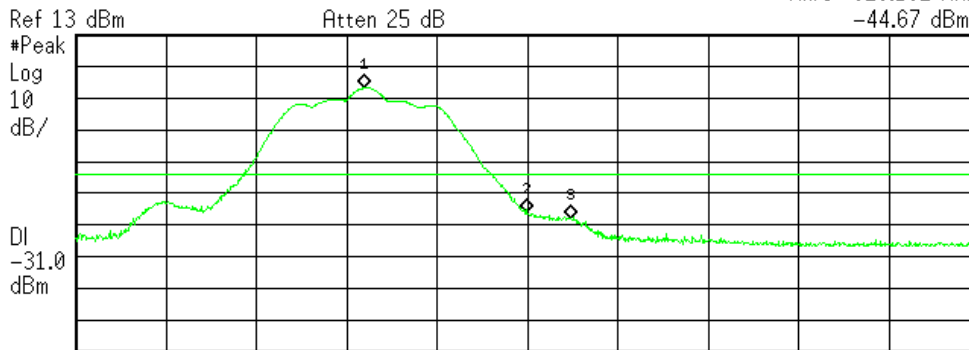
No Peak Found

Lower Channel – Band-edge (<-30dBm)

Agilent 11:02:37 Aug 25, 2016

R T

Mkr3 928.192 MHz  
-44.67 dBm



Start 926 MHz Stop 930 MHz  
#Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts)

| Marker | Trace | Type | X Axis      | Amplitude  |
|--------|-------|------|-------------|------------|
| 1      | (1)   | Freq | 927.280 MHz | -3.802 dBm |
| 2      | (1)   | Freq | 928.000 MHz | -43.22 dBm |
| 3      | (1)   | Freq | 928.192 MHz | -44.67 dBm |

C:\temp.gif file saved

Upper Channel – Band-edge (<-30dBm)



### Conducted Spurious Emission

Conducted spurious emissions at the antenna port were measured in accordance with FCC KDB 558074 D01 DTS Measurement Guidance v03r05 Section 11.0.

Frequency range up to 10GHz was investigated for all 3 channels (low, middle and high) at the EUT antenna port.

| Spurious Conducted Emissions - Maximum In Band Peak PSD in 100 KHz RBW |               |                                 |                        |
|--|---------------|---------------------------------|------------------------|
| Date: 25-Aug-16  |               | Company: Ideal Industries, Inc. |                        |
| Engineer: Tuyen Truong   |               | EUT Desc: SCD1000               |                        |
| Temp: 23.4°C   |               | Humidity: 50%                   |                        |
|  |               | Pressure: 1010mBar              |                        |
| Work Order: Q2569  |               |                                 |                        |
| EUT Operating Voltage/Frequency: 120Vac/60Hz                           |               |                                 |                        |
| Frequency Range: 902.7-927.3 MHz                                       |               |                                 |                        |
| Notes: Maximum In Band Peak PSD in 100 KHz RBW                         |               |                                 |                        |
| Frequency (MHz)  | Reading (dBm) | Attenuation (dB)                | Adjusted Reading (dBm) |
| 902.7  | -1.043        | 19.42                           | 18.4                   |
| Test Site: CEM15   |               | Attenuation: Asset#791          |                        |
| Analyzer: SA#1328  |               |                                 |                        |
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| Conducted Spurious Emission  |               |                                 |                               |                               |  |                    |
|--|---------------|---------------------------------|-------------------------------|-------------------------------|--|--------------------|
| Date: 25-Aug-16  |               | Company: Ideal Industries, Inc. |                               |                               | Work Order: Q2569                            |                    |
| Engineer: Tuyen Truong   |               | EUT Desc: SCD1000               |                               |                               | EUT Operating Voltage/Frequency: 120Vac/60Hz |                    |
| Temp: 23.4°C   |               | Humidity: 50%                   |                               | Pressure: 1010mBar            |  |                    |
| Frequency Range: 902.7-927.3 MHz   |               |                                 |                               |                               |  |                    |
| Notes: TX on low channel<br>The Limit here is set to -30dB from the max in-band peak PSD level in 100kHz RBW (Attenuation factor included or 19.42dBm) |               |                                 |                               |                               |  |                    |
| Frequency (MHz)  | Reading (dBm) | Attenuation (dB)                | Final Conducted Reading (dBm) | FCC 15.247                    |  |                    |
|  |               |                                 |                               | Limit (dBm)                   | Margin (dB)                                  | Result (Pass/Fail) |
| 30.0   | -53.74        | 19.42                           | -34.32                        | -11.60                        | -22.72                                       | Pass               |
| 1805.4   | -53.18        | 19.42                           | -33.76                        | -11.60                        | -22.16                                       | Pass               |
| <b>Table Result:</b> Pass by -22.16 dB   |               |                                 |                               | <b>Worst Freq:</b> 1805.4 MHz |  |                    |
| Test Site: CEM15   |               | Attenuation: Asset#791          |                               |                               |  |                    |
| Analyzer: SA#1328  |               |                                 |                               |                               |  |                    |
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| Conducted Spurious Emission  |               |                                 |                               |                               |  |                    |
|--|---------------|---------------------------------|-------------------------------|-------------------------------|--|--------------------|
| Date: 25-Aug-16  |               | Company: Ideal Industries, Inc. |                               |                               | Work Order: Q2569                            |                    |
| Engineer: Tuyen Truong   |               | EUT Desc: SCD1000               |                               |                               | EUT Operating Voltage/Frequency: 120Vac/60Hz |                    |
| Temp: 23.4°C   |               | Humidity: 50%                   |                               | Pressure: 1010mBar            |  |                    |
| Frequency Range: 902.7-927.3 MHz   |               |                                 |                               |                               |  |                    |
| Notes: TX on mid channel<br>The Limit here is set to -30dB from the max in-band peak PSD level in 100kHz RBW (Attenuation factor included or 19.42dBm) |               |                                 |                               |                               |  |                    |
| Frequency (MHz)  | Reading (dBm) | Attenuation (dB)                | Final Conducted Reading (dBm) | FCC 15.247                    |  |                    |
|  |               |                                 |                               | Limit (dBm)                   | Margin (dB)                                  | Result (Pass/Fail) |
| 30.0   | -53.93        | 19.42                           | -34.51                        | -11.60                        | -22.91                                       | Pass               |
| 1830.0   | -53.48        | 19.42                           | -34.06                        | -11.60                        | -22.46                                       | Pass               |
| <b>Table Result:</b> Pass by -22.46 dB   |               |                                 |                               | <b>Worst Freq:</b> 1830.0 MHz |  |                    |
| Test Site: CEM15   |               | Attenuation: Asset#791          |                               |                               |  |                    |
| Analyzer: SA#1328  |               |                                 |                               |                               |  |                    |
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**Conducted Spurious Emission**

**Date:** 25-Aug-16 **Company:** Ideal Industries, Inc. **Work Order:** Q2569  
**Engineer:** Tuyen Truong **EUT Desc:** SCD1000 **EUT Operating Voltage/Frequency:** 120Vac/60Hz  
**Temp:** 23.4°C **Humidity:** 50% **Pressure:** 1010mBar

**Frequency Range:** 902.7-927.3 MHz

**Notes:** TX on high channel  
 The Limit here is set to -30dB from the max in-band peak PSD level in 100kHz RBW (Attenuation factor included or 19.42dBm)

| Frequency (MHz) | Reading (dBm) | Attenuation (dB) | Final Conducted Reading (dBm) | FCC 15.247  |             |                    |
|-----------------|---------------|------------------|-------------------------------|-------------|-------------|--------------------|
|                 |               |                  |                               | Limit (dBm) | Margin (dB) | Result (Pass/Fail) |
| 30.0            | -53.30        | 19.42            | -33.88                        | -11.60      | -22.28      | Pass               |
| 1854.6          | -53.19        | 19.42            | -33.77                        | -11.60      | -22.17      | Pass               |

**Table Result:** Pass by -22.17 dB **Worst Freq:** 1854.6 MHz

**Test Site:** CEMI5 **Attenuation:** Asset#791  
**Analyzer:** SA#1328

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Rev. 8/21/2016

| Spectrum Analyzers / Receivers / Preselectors | Range         | MN             | Mfr                      | SN              | Asset         | Cat     | Calibration Due       | Calibrated on         |
|---|---------------|----------------|--------------------------|-----------------|---------------|---------|-----------------------|-----------------------|
| SA EMI Chamber (1328)                         | 9kHz-13.2 GHz | E4405B         | Agilent                  | MY44210241      | 1328          | I       | 2/26/2017             | 2/26/2016             |
| Conducted Test Sites (Mains / Telco)          | FCC Code      | VCCI Code      | Cat                      | Calibration Due | Calibrated on |         |                       |                       |
| CEMI 5  | 719150        | A-0015         | III                      | NA              | N/A           |         |                       |                       |
| Meteorological Meters                         | Range         | MN             | Mfr                      | SN              | Asset         | Cat     | Calibration Due       | Calibrated on         |
| Weather Clock (Pressure Only)<br>TH A#2085    |               | BA928<br>HTC-1 | Oregon Scientific<br>HDE | C3166-1         | 831<br>2085   | I<br>II | 4/28/2018<br>4/5/2017 | 4/28/2016<br>4/5/2016 |
| Preamps / Couplers Attenuators / Filters      | Range         | MN             | Mfr                      | SN              | Asset         | Cat     | Calibration Due       | Calibrated on         |
| HF 20dB 50W Attenuator                        | 0.009-18 GHz  | PE 7019-20     | Pasternack               | 1               | 791           | II      | 8/14/2017             | 8/14/2016             |

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



# Power Spectral Density

## LIMIT

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

Per 558074 D01 DTS Measurement Guidance v03r05 DTS Method 10.3 AVGPS-1 (trace averaging with EUT transmitting at full power throughout each sweep)

## MEASUREMENTS / RESULTS

| Power Spectral Density                |               |                                 |                               |  |                   |                    |
|---------------------------------------|---------------|---------------------------------|-------------------------------|--|-------------------|--------------------|
| Date: 25-Aug-16                       |               | Company: Ideal Industries, Inc. |                               |  | Work Order: Q2569 |                    |
| Engineer: Tuyen Truong                |               | EUT Desc: SCD1000               |                               | EUT Operating Voltage/Frequency: 120Vac/60Hz |                   |                    |
| Temp: 23.4°C                          |               | Humidity: 50%                   |                               | Pressure: 1010mBar                           |                   |                    |
| Frequency Range: 902.7-927.3 MHz      |               |                                 |                               |  |                   |                    |
| Notes:                                |               |                                 |                               |  |                   |                    |
| Frequency (MHz)                       | Reading (dBm) | Attenuation (dB)                | Final Conducted Reading (dBm) | FCC 15.247                                   |                   |                    |
|                                       |               |                                 |                               | Limit (dBm)                                  | Margin (dB)       | Result (Pass/Fail) |
| 902.7                                 | -13.49        | 19.42                           | 5.93                          | 8.0  | -2.07             | Pass               |
| 915                                   | -15.64        | 19.42                           | 3.78                          | 8.0  | -4.22             | Pass               |
| 927.3                                 | -17.91        | 19.42                           | 1.51                          | 8.0  | -6.49             | Pass               |
| <b>Table Result:</b> Pass by -2.07 dB |               |                                 |                               | <b>Worst Freq:</b> 902.7 MHz                 |                   |                    |
| Test Site: CEMI5                      |               | Attenuation: Asset#791          |                               |  |                   |                    |
| Analyzer: SA#1328                     |               |                                 |                               |  |                   |                    |

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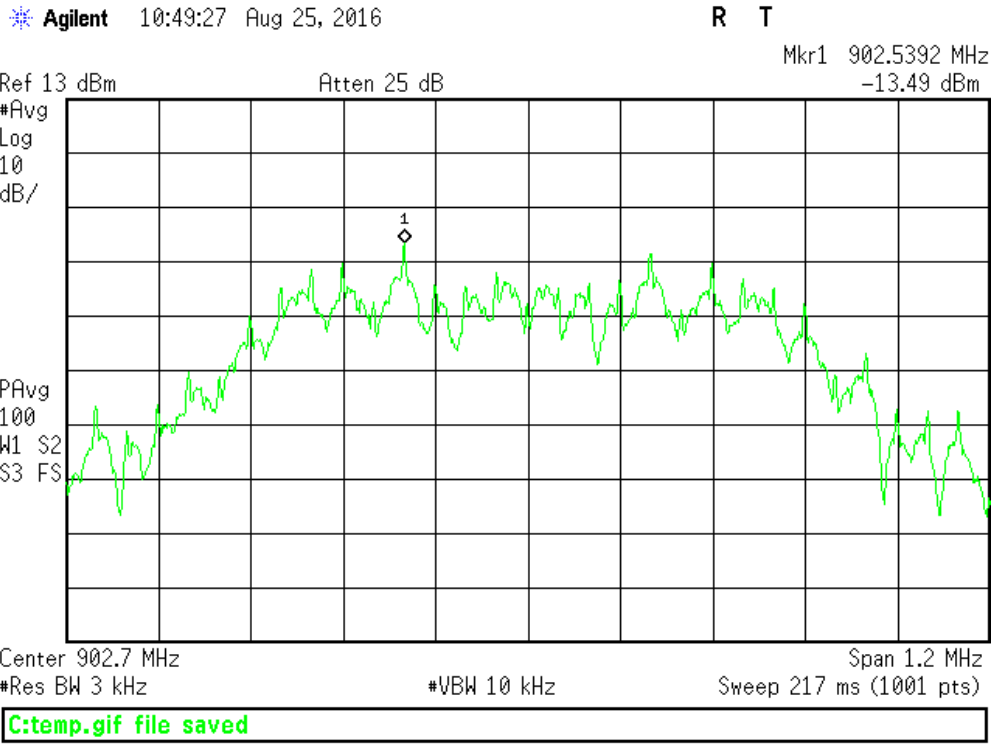
Rev. 8/21/2016

| Spectrum Analyzers / Receivers / Preselectors | Range         | MN                | Mfr        | SN              | Asset         | Cat             | Calibration Due | Calibrated on |  |
|---|---------------|-------------------|------------|-----------------|---------------|-----------------|-----------------|---------------|--|
| SA EMI Chamber (1328)                         | 9kHz-13.2 GHz | E4405B            | Agilent    | MY44210241      | 1328          | I               | 2/26/2017       | 2/26/2016     |  |
| Conducted Test Sites (Mains / Telco)          | FCC Code      | VCCI Code         | Cat        | Calibration Due | Calibrated on |                 |                 |               |  |
| CEMI 5  | 719150        | A-0015            | III        | NA              | N/A           |                 |                 |               |  |
| 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#2085                                     | HTC-1         | HDE               |            | 2085            | II            | 4/5/2017        | 4/5/2016        |               |  |
| Preamps / Couplers Attenuators / Filters      | Range         | MN                | Mfr        | SN              | Asset         | Cat             | Calibration Due | Calibrated on |  |
| HF 20dB 50W Attenuator                        | 0.009-18 GHz  | PE 7019-20        | Pasternack | 1               | 791           | II              | 8/14/2017       | 8/14/2016     |  |

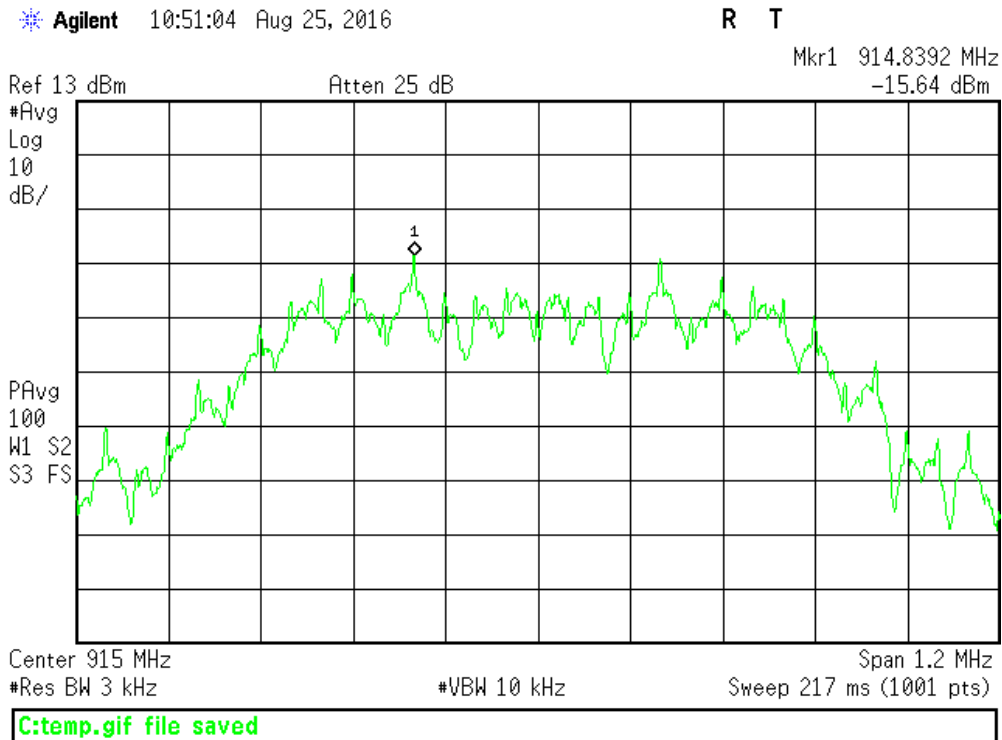
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



PLOTS



PSD – Low Channel



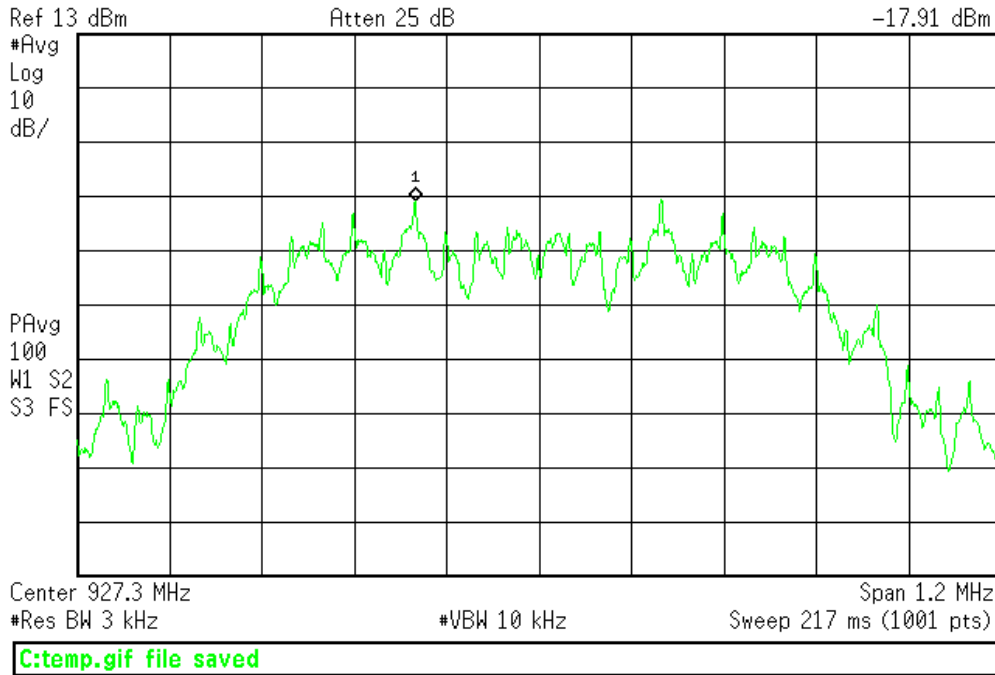
PSD – Mid Channel



Agilent 10:52:25 Aug 25, 2016

R T

Mkr1 927.1392 MHz  
-17.91 dBm



PSD – High Channel





## AC Line Conducted Emissions LIMITS

| Frequency of emission (MHz) | Quasi-peak limit (dBµV) | Average limit (dBµV) |
|-----------------------------|-------------------------|----------------------|
| 0.15-0.5                    | 66 to 56*               | 56 to 46*            |
| 0.5-5                       | 56                      | 46                   |
| 5-30                        | 60                      | 50                   |

\*Decreases with the logarithm of the frequency.

[47 CFR 15.207(a)]

## MEASUREMENTS / RESULTS

| AC Conducted Emissions Data Table  |                     |            |                  |             |   |         |                   |                  |                 |  |                    |                  |             |                    |
|--|---------------------|------------|------------------|-------------|---|---------|-------------------|------------------|-----------------|--|--------------------|------------------|-------------|--------------------|
| Date: 02-Sep-16<br>Engineer: Tuyen Truong<br>Temp: 22.7 °C   |                     |            |                  |             | Company: Ideal Industries, Inc.<br>EUT Desc: SCD1000<br>Humidity: 47% |         |                   |                  |                 | Work Order: Q2569<br>Pressure: 1010 mBar |                    |                  |             |                    |
| Notes:   |                     |            |                  |             |   |         |                   |                  |                 |  |                    |                  |             |                    |
| Frequency Range: 0.15 to 30 MHz  |                     |            |                  |             |   |         |                   |                  |                 | EUT Input Voltage/Frequency: 120Vac/60Hz |                    |                  |             |                    |
| Frequency (MHz)  | Quasi-Peak Readings |            | Average Readings |             | LISN Factors  |         | Cable Factor (dB) | ATTN Factor (dB) | FCC 15.207      |  |                    | FCC 15.207       |             |                    |
|  | QP1 (dBµV)          | QP2 (dBµV) | AVG1 (dBµV)      | AVG2 (dBµV) | L1 (dB)   | L2 (dB) |                   |                  | QP Limit (dBµV) | Margin (dB)                              | Result (Pass/Fail) | AVG Limit (dBµV) | Margin (dB) | Result (Pass/Fail) |
| 0.43   | 25.2                | 26.3       | 17.6             | 19.9        | 0.0   | 0.0     | -0.1              | -20.3            | 57.2            | -10.4                                    | Pass               | 47.2             | -6.8        | Pass               |
| 0.90   | 23.1                | 21.4       | 11.2             | 10.8        | -0.1  | 0.0     | -0.1              | -20.3            | 56.0            | -12.4                                    | Pass               | 46.0             | -14.3       | Pass               |
| 4.03   | 19.6                | 17.8       | 8.9              | 8.3         | -0.1  | -0.1    | -0.2              | -20.3            | 56.0            | -15.8                                    | Pass               | 46.0             | -16.5       | Pass               |
| 10.08  | 18.8                | 16.7       | 7.8              | 6.3         | -0.1  | -0.1    | -0.2              | -20.3            | 60.0            | -20.6                                    | Pass               | 50.0             | -21.5       | Pass               |
| 13.36  | 20.4                | 18.7       | 8.3              | 6.8         | -0.2  | -0.2    | -0.2              | -20.3            | 60.0            | -18.9                                    | Pass               | 50.0             | -21.0       | Pass               |
| 22.99  | 18.0                | 16.2       | 6.4              | 5.1         | -0.2  | -0.2    | -0.3              | -20.3            | 60.0            | -21.3                                    | Pass               | 50.0             | -22.8       | Pass               |
| <b>Result: Pass</b>  |                     |            |                  |             | <b>Worst Margin: -6.8 dB</b>  |         |                   |                  |                 | <b>Frequency: 0.433 MHz</b>              |                    |                  |             |                    |
| Measurement Device: LISN Asset 1791  |                     |            |                  |             | Cable: CEMI-01  |         |                   |                  |                 | Spectrum Analyzer: Rental SA #5          |                    |                  |             |                    |
|  |                     |            |                  |             | Attenuator: 20dB Atten-4  |         |                   |                  |                 | Site: CEMI 6                             |                    |                  |             |                    |
| C-S CEMI Calculator Version 3.0.14<br>Adjusted Reading = Raw Reading + LISN Insertion Loss + Cable Loss + Attenuation<br>Equipment Factor Sheet rev: 8/24/2016 |                     |            |                  |             |   |         |                   |                  |                 |  |                    |                  |             |                    |

| AC Conducted Emissions Data Table  |                     |            |                  |             |   |         |                   |                  |                 |  |                    |                  |             |                    |
|--|---------------------|------------|------------------|-------------|---|---------|-------------------|------------------|-----------------|--|--------------------|------------------|-------------|--------------------|
| Date: 02-Sep-16<br>Engineer: Tuyen Truong<br>Temp: 22.7 °C   |                     |            |                  |             | Company: Ideal Industries, Inc.<br>EUT Desc: SCD1000<br>Humidity: 47% |         |                   |                  |                 | Work Order: Q2569<br>Pressure: 1010 mBar |                    |                  |             |                    |
| Notes:   |                     |            |                  |             |   |         |                   |                  |                 |  |                    |                  |             |                    |
| Frequency Range: 0.15 to 30 MHz  |                     |            |                  |             |   |         |                   |                  |                 | EUT Input Voltage/Frequency: 277Vac/60Hz |                    |                  |             |                    |
| Frequency (MHz)  | Quasi-Peak Readings |            | Average Readings |             | LISN Factors  |         | Cable Factor (dB) | ATTN Factor (dB) | FCC 15.207      |  |                    | FCC 15.207       |             |                    |
|  | QP1 (dBµV)          | QP2 (dBµV) | AVG1 (dBµV)      | AVG2 (dBµV) | L1 (dB)   | L2 (dB) |                   |                  | QP Limit (dBµV) | Margin (dB)                              | Result (Pass/Fail) | AVG Limit (dBµV) | Margin (dB) | Result (Pass/Fail) |
| 0.43   | 26.7                | 27.1       | 19.2             | 18.4        | 0.0   | 0.0     | -0.1              | -20.3            | 57.2            | -9.7                                     | Pass               | 47.2             | -7.6        | Pass               |
| 0.90   | 18.5                | 20.8       | 14.6             | 9.9         | -0.1  | 0.0     | -0.1              | -20.3            | 56.0            | -14.7                                    | Pass               | 46.0             | -10.9       | Pass               |
| 4.03   | 20.1                | 18.2       | 10.5             | 7.6         | -0.1  | -0.1    | -0.2              | -20.3            | 56.0            | -15.4                                    | Pass               | 46.0             | -14.9       | Pass               |
| 10.08  | 18.9                | 19.7       | 11.3             | 7.0         | -0.1  | -0.1    | -0.2              | -20.3            | 60.0            | -19.6                                    | Pass               | 50.0             | -18.1       | Pass               |
| 13.36  | 20.0                | 19.1       | 8.3              | 7.1         | -0.2  | -0.2    | -0.2              | -20.3            | 60.0            | -19.3                                    | Pass               | 50.0             | -21.0       | Pass               |
| 22.99  | 14.9                | 15.7       | 4.3              | 3.9         | -0.2  | -0.2    | -0.3              | -20.3            | 60.0            | -23.6                                    | Pass               | 50.0             | -24.9       | Pass               |
| <b>Result: Pass</b>  |                     |            |                  |             | <b>Worst Margin: -7.6 dB</b>  |         |                   |                  |                 | <b>Frequency: 0.433 MHz</b>              |                    |                  |             |                    |
| Measurement Device: LISN Asset 1791  |                     |            |                  |             | Cable: CEMI-01  |         |                   |                  |                 | Spectrum Analyzer: Rental SA #5          |                    |                  |             |                    |
|  |                     |            |                  |             | Attenuator: 20dB Atten-4  |         |                   |                  |                 | Site: CEMI 6                             |                    |                  |             |                    |
| C-S CEMI Calculator Version 3.0.14<br>Adjusted Reading = Raw Reading + LISN Insertion Loss + Cable Loss + Attenuation<br>Equipment Factor Sheet rev: 8/24/2016 |                     |            |                  |             |   |         |                   |                  |                 |  |                    |                  |             |                    |



Rev. 8/29/2016

| Spectrum Analyzers / Receivers / Preselectors |  | Range         | MN        | Mfr               | SN            | Asset | Cat | Calibration Due | Calibrated on |
|---|--|---------------|-----------|-------------------|---------------|-------|-----|-----------------|---------------|
| SA EMI Chamber (1327)                         |  | 9kHz-13.2 GHz | E4405B    | Agilent           | MY45103416    | 1327  | I   | 8/4/2017        | 8/4/2016      |
| LISNs/Measurement Probes                      |  | Range         | MN        | Mfr               | SN            | Asset | Cat | Calibration Due | Calibrated on |
| LISN Asset 1791                               |  | 9KHz-30MHz    | NNLK 8121 | Schwarzbeck       | NNLK 8121-603 | 1791  | I   | 6/23/2017       | 6/23/2016     |
| Conducted Test Sites (Mains / Telco)          |  | FCC Code      | VCCI Code |                   |               |       | Cat | Calibration Due | Calibrated on |
| CEMI 6  |  | 719150        | A-0015    |                   |               |       | III | NA              | N/A           |
| 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#2082                                     |  |               | HTC-1     | HDE               |               | 2082  | II  | 4/5/2017        | 4/5/2016      |
| Cables  |  | Range         |           | Mfr               |               |       | Cat | Calibration Due | Calibrated on |
| CEMI-01                                       |  | 9kHz - 2GHz   |           | C-S               |               |       | II  | 9/11/2016       | 9/11/2015     |
| Attenuators                                   |  | Range         | MN        | Mfr               | SN            | Asset | Cat | Calibration Due | Calibrated on |
| 20dB Attenuator-60                            |  | 9kHz-2GHz     |           |                   | N/A           |       | II  | 4/12/2017       | 4/12/2016     |

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



## 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

| 99% OCCUPIED BANDWIDTH           |                                  |  |  |
|----------------------------------|----------------------------------|--|--|
| Date: 25-Aug-16                  | Company: Ideal Industries, Inc.  | Work Order: Q2569                            |  |
| Engineer: Tuyen Truong           | EUT Desc: SCD1000                | EUT Operating Voltage/Frequency: 120Vac/60Hz |  |
| Temp: 23.4°C                     | Humidity: 50%                    | Pressure: 1010mBar                           |  |
| Frequency Range: 902.7-927.3 MHz |                                  |  |  |
| Notes:                           |                                  |  |  |
| Frequency (MHz)                  | Occupied Bandwidth Reading (KHz) |  |  |
| 902.7                            | 764.7554                         |  |  |
| 915                              | 765.6934                         |  |  |
| 927.3                            | 766.9552                         |  |  |
| Test Site: CEM15                 |                                  | Attenuation: Asset#791                       |  |
| Analyzer: SA#1328                |                                  |  |  |
| Copyright Curtis-Straus LLC 2000 |                                  |  |  |

Rev. 8/21/2016

| Spectrum Analyzers / Receivers / Preselectors | Range         | MN         | Mfr               | SN         | Asset | Cat | Calibration Due | Calibrated on |
|---|---------------|------------|-------------------|------------|-------|-----|-----------------|---------------|
| SA EMI Chamber (1328)                         | 9kHz-13.2 GHz | E4405B     | Agilent           | MY44210241 | 1328  | I   | 2/26/2017       | 2/26/2016     |
| Conducted Test Sites (Mains / Telco)          | FCC Code      |            | VCCI Code         |            |       | Cat | Calibration Due | Calibrated on |
| CEMI 5  | 719150        |            | A-0015            |            |       | III | NA              | N/A           |
| 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#2085                                     |               | HTC-1      | HDE               |            | 2085  | II  | 4/5/2017        | 4/5/2016      |
| Preamps / Couplers Attenuators / Filters      | Range         | MN         | Mfr               | SN         | Asset | Cat | Calibration Due | Calibrated on |
| HF 20dB 50W Attenuator                        | 0.009-18 GHz  | PE 7019-20 | Pasternack        | 1          | 791   | II  | 8/14/2017       | 8/14/2016     |

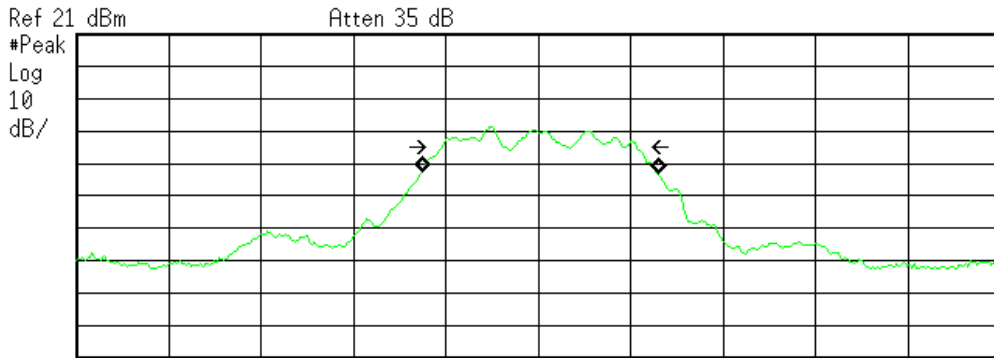
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



Plot(s)

Agilent 08:09:27 Aug 25, 2016

R T



Center 902.7 MHz Span 3 MHz  
 #Res BW 30 kHz #VBW 100 kHz Sweep 5 ms (401 pts)

Occupied Bandwidth  
 764.7554 kHz

Occ BW % Pwr 99.00 %  
 x dB -6.00 dB

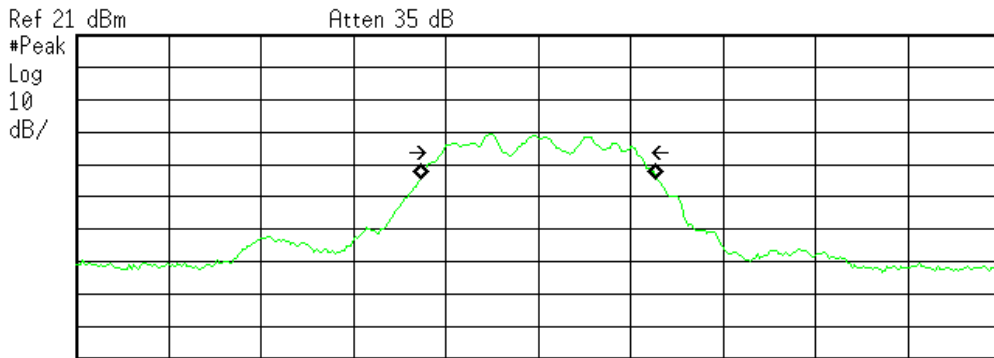
Transmit Freq Error 3.933 kHz  
 x dB Bandwidth 633.769 kHz

C:\temp.gif file saved

Occupied Bandwidth – Low Channel

Agilent 08:16:35 Aug 25, 2016

R T



Center 915 MHz Span 3 MHz  
 #Res BW 30 kHz #VBW 100 kHz Sweep 5 ms (401 pts)

Occupied Bandwidth  
 765.6934 kHz

Occ BW % Pwr 99.00 %  
 x dB -6.00 dB

Transmit Freq Error 3.254 kHz  
 x dB Bandwidth 634.038 kHz

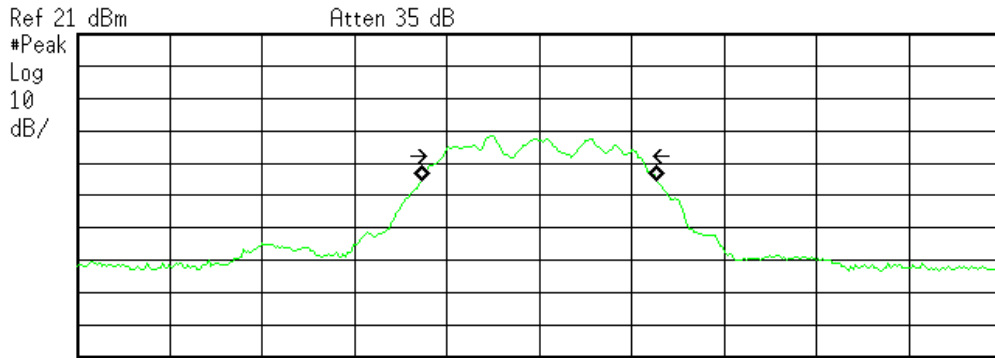
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Occupied Bandwidth – Middle Channel



Agilent 08:27:13 Aug 25, 2016

R T



Center 927.3 MHz Span 3 MHz  
 #Res BW 30 kHz #VBW 100 kHz Sweep 5 ms (401 pts)

**Occupied Bandwidth**  
 766.9552 kHz

**Occ BW % Pwr** 99.00 %  
**x dB** -6.00 dB

**Transmit Freq Error** 742.731 Hz  
**x dB Bandwidth** 634.287 kHz

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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.

| Measurement   | Expanded Uncertainty k=2 | Maximum allowable uncertainty |
|---|--------------------------|-------------------------------|
| Radiated Emissions (30-1000MHz)   |                          |                               |
| NIST  | 5.6dB                    | N/A                           |
| CISPR   | 4.6dB                    | 5.2dB (Ucisprr)               |
| 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 (Ucisprr)               |
| 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)  | $3.23 \times 10^{-8}$    | $1 \times 10^{-7}$            |
| 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%<br>0.3dB            | 5%<br>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   |                          |                               |



## Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its 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 any 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 solely 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 furnished 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 contemplated 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 goodwill 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.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. 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 disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does 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 any 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 where 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 forth with 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.

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) NOTWITHSTANDING 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.

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 laws principles. 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 Curtis-Straus may use to delegate the performance of work can be provided upon request.

