

**REVISIONS**

| LTR | DESCRIPTION   | DATE (YR-MO-DA) | APPROVED          |
|-----|---|-----------------|-------------------|
| A   | Made changes to paragraphs 1.3 along with footnote 4, sheet 3. Table I, made corrections to Supply currents test, Address input currents test, and the Output leakage current tests. Made corrections to Figures 2, 3, 4, and 5. -sld | 10-07-26        | Charles F. Saffle |
| B   | Updated drawing to reflect the latest requirements of MIL-PRF-38534. -sld   | 15/11/17        | Charles F. Saffle |



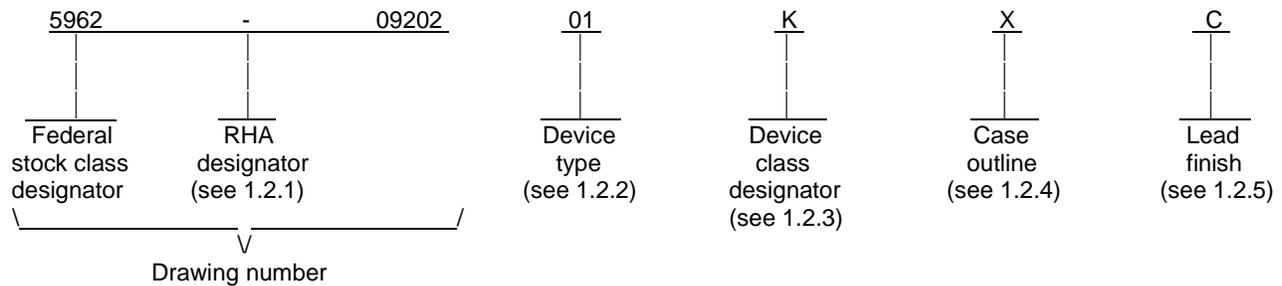
|                      |       |    |    |    |    |   |   |   |   |   |   |   |    |    |    |    |    |   |   |  |
|----------------------|-------|----|----|----|----|---|---|---|---|---|---|---|----|----|----|----|----|---|---|--|
| REV                  |       |    |    |    |    |   |   |   |   |   |   |   |    |    |    |    |    |   |   |  |
| SHEET                |       |    |    |    |    |   |   |   |   |   |   |   |    |    |    |    |    |   |   |  |
| REV                  | B     | B  | B  | B  | B  |   |   |   |   |   |   |   |    |    |    |    |    |   |   |  |
| SHEET                | 15    | 16 | 17 | 18 | 19 |   |   |   |   |   |   |   |    |    |    |    |    |   |   |  |
| REV STATUS OF SHEETS | REV   |    |    | B  | B  | B | B | B | B | B | B | B | B  | B  | B  | B  | B  | B | B |  |
|                      | SHEET |    |    | 1  | 2  | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |   |   |  |

|  |                                    |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |           |
|--|------------------------------------|---|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------|
| PMIC N/A   | PREPARED BY<br>Steve Duncan        | <p align="center"><b>DLA LAND AND MARITIME</b><br/> <b>COLUMBUS, OHIO 43218-3990</b><br/> <a href="http://www.landandmaritime.dla.mil/">http://www.landandmaritime.dla.mil/</a></p> |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |           |
| <p align="center"><b>STANDARD MICROCIRCUIT DRAWING</b></p> <p align="center">THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE</p> <p align="center">AMSC N/A</p> | CHECKED BY<br>Greg Cecil           |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |           |
|  | APPROVED BY<br>Joseph D. Rodenbeck | <p align="center"><b>MICROCIRCUIT, HYBRID, LINEAR, 64 CHANNEL, ANALOG MULTIPLEXER</b></p>   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |           |
|  | DRAWING APPROVAL DATE<br>09-05-08  |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |           |
|  | REVISION LEVEL<br><b>B</b>         |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | SIZE<br>A |
|  |                                    | SHEET   | 1 OF 19 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |           |

1. SCOPE

1.1 Scope. This drawing documents five product assurance classes as defined in paragraph 1.2.3 and MIL-PRF-38534. A choice of case outlines and lead finishes which are available and are reflected in the Part or Identifying Number (PIN). When available, a choice of radiation hardness assurance levels are reflected in the PIN.

1.2 PIN. The PIN is as shown in the following example:



1.2.1 Radiation hardness assurance (RHA) designator. RHA marked devices meet the MIL-PRF-38534 specified RHA levels and are marked with the appropriate RHA designator. A dash (-) indicates a non-RHA device.

1.2.2 Device type(s). The device type(s) identify the circuit function as follows:

| <u>Device type</u> | <u>Generic number</u> | <u>Circuit function</u>  |
|--------------------|-----------------------|--|
| 01                 | ACT8510               | 64 channel analog multiplexer, high impedance analog input with ESD protection, 32 channels Voltage, 32 channels Voltage and Current |
| 02                 | ACT8511               | 64 channel analog multiplexer, high impedance analog input with ESD protection   |

1.2.3 Device class designator. This device class designator is a single letter identifying the product assurance level. All levels are defined by the requirements of MIL-PRF-38534 and require QML Certification as well as qualification (Class H, K, and E) or QML Listing (Class G and D). The product assurance levels are as follows:

| <u>Device class</u> | <u>Device performance documentation</u>   |
|---------------------|---|
| K                   | Highest reliability class available. This level is intended for use in space applications.  |
| H                   | Standard military quality class level. This level is intended for use in applications where non-space high reliability devices are required.  |
| G                   | Reduced testing version of the standard military quality class. This level uses the Class H screening and In-Process Inspections with a possible limited temperature range, manufacturer specified incoming flow, and the manufacturer guarantees (but may not test) periodic and conformance inspections (Group A, B, C, and D).                           |
| E                   | Designates devices which are based upon one of the other classes (K, H, or G) with exception(s) taken to the requirements of that class. These exception(s) must be specified in the device acquisition document; therefore the acquisition document should be reviewed to ensure that the exception(s) taken will not adversely affect system performance. |
| D                   | Manufacturer specified quality class. Quality level is defined by the manufacturers internal, QML certified flow. This product may have a limited temperature range.  |

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| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b> |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>2</b> |

1.2.4 Case outline(s). The case outline(s) are as designated in MIL-STD-1835 and as follows:

| <u>Outline letter</u> | <u>Descriptive designator</u> | <u>Terminals</u> | <u>Package style</u>   |
|-----------------------|-------------------------------|------------------|------------------------|
| X                     | See figure 1                  | 96               | Ceramic quad flat pack |

1.2.5 Lead finish. The lead finish is as specified in MIL-PRF-38534.

1.3 Absolute maximum ratings. 1/

|  |   |
|--|---|
| Positive supply voltage between +V <sub>EE</sub> and GND .....         | +20 V dc                                    |
| Negative supply voltage between -V <sub>EE</sub> and GND.....          | -20 V dc                                    |
| V <sub>REF</sub> to GND.....   | +7.5 V dc                                   |
| Digital input overvoltage range:                                       |   |
| V <sub>EN</sub> (pins 5, 6, 91, and 92).....                           | (< V <sub>REF</sub> + 0.5)V, (> GND - 0.5)V |
| V <sub>A</sub> (pins 1, 3, 93, and 95).....                            | (< V <sub>REF</sub> + 0.5)V, (> GND - 0.5)V |
| V <sub>B</sub> (pins 2, 4, 94, and 96).....                            | (< V <sub>REF</sub> + 0.5)V, (> GND - 0.5)V |
| Analog input overvoltage range .....                                   | -18 V dc ≤ V <sub>IN</sub> ≤ +18 V dc       |
| Power dissipation (P <sub>D</sub> ), T <sub>C</sub> = -55°C to +125°C: |   |
| Device type 01.....  | 120 mW                                      |
| Device type 02.....  | 80 mW                                       |
| Junction temperature (T <sub>J</sub> ) .....                           | +150°C                                      |
| Thermal resistance junction-to-case (θ <sub>JC</sub> ) 2/ .....        | 5.5°C/W                                     |
| Storage temperature .....  | -65°C to +150°C                             |
| Lead temperature (soldering, 10 seconds) .....                         | +300°C                                      |

1.4 Recommended operating conditions. 3/

|   |                 |
|---|-----------------|
| Positive supply voltage (+V <sub>EE</sub> ) 4/ .....    | +15 V dc        |
| Negative supply voltage (-V <sub>EE</sub> ) 4/.....     | -15 V dc        |
| V <sub>REF</sub> 4/.....                                | +5 V dc         |
| Logic low level voltage (V <sub>AL</sub> ).....         | +0.8 V dc       |
| Logic high level voltage (V <sub>AH</sub> ).....        | +4.0 V dc       |
| Case operating temperature range (T <sub>C</sub> )..... | -55°C to +125°C |

## 2. APPLICABLE DOCUMENTS

2.1 Government specification, standards, and handbooks. The following specification, standards, and handbooks form a part of this drawing to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

### DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-38534 - Hybrid Microcircuits, General Specification for.

### DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-883 - Test Method Standard Microcircuits.  
MIL-STD-1835 - Interface Standard Electronic Component Case Outlines.

- 1/ Stresses above the absolute maximum ratings may cause permanent damage to the device. Extended operation at the maximum levels may degrade performance and affect reliability.  
2/ Based on the maximum power dissipation spread over all six die.  
3/ The devices cannot be operated with analog inputs from -15 V up to -5 V.  
4/ Recommended power supply turn on sequence -V<sub>EE</sub>, V<sub>REF</sub>, followed by +V<sub>EE</sub>.

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| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b> | SIZE<br><b>A</b>                                   |                            | <b>5962-09202</b> |
|  | DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | REVISION LEVEL<br><b>B</b> | SHEET<br><b>3</b> |

DEPARTMENT OF DEFENSE HANDBOOKS

- MIL-HDBK-103 - List of Standard Microcircuit Drawings.
- MIL-HDBK-780 - Standard Microcircuit Drawings.

Copies of these documents are available online at <http://quicksearch.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2 Order of precedence. In the event of a conflict between the text of this drawing and the references cited herein, the text of this drawing takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Item requirements. The individual item performance requirements for device classes D, E, G, H, and K shall be in accordance with MIL-PRF-38534. Compliance with MIL-PRF-38534 shall include the performance of all tests herein or as designated in the device manufacturer's Quality Management (QM) plan or as designated for the applicable device class. The manufacturer may eliminate, modify or optimize the tests and inspections herein, however the performance requirements as defined in MIL-PRF-38534 shall be met for the applicable device class. In addition, the modification in the QM plan shall not affect the form, fit, or function of the device for the applicable device class.

3.2 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38534 and herein.

3.2.1 Case outline(s). The case outline(s) shall be in accordance with 1.2.4 herein and figure 1.

3.2.2 Terminal connections. The terminal connections shall be as specified on figure 2.

3.2.3 Truth table(s). The truth table(s) shall be as specified on figure 3.

3.2.4 Switching waveform(s). The switching waveform(s) shall be as specified on figure 4.

3.2.5 Block diagram. The block diagram shall be as specified on figure 5.

3.3 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in table I and shall apply over the full specified operating temperature range.

3.4 Electrical test requirements. The electrical test requirements shall be the subgroups specified in table II. The electrical tests for each subgroup are defined in table I.

3.5 Marking of device(s). Marking of device(s) shall be in accordance with MIL-PRF-38534. The device shall be marked with the PIN listed in 1.2 herein. In addition, the manufacturer's vendor similar PIN may also be marked.

3.6 Data. In addition to the general performance requirements of MIL-PRF-38534, the manufacturer of the device described herein shall maintain the electrical test data (variables format) from the initial quality conformance inspection group A lot sample, for each device type listed herein. Also, the data should include a summary of all parameters manually tested, and for those which, if any, are guaranteed. This data shall be maintained under document revision level control by the manufacturer and be made available to the preparing activity (DLA Land and Maritime - VA) upon request.

3.7 Certificate of compliance. A certificate of compliance shall be required from a manufacturer in order to supply to this drawing. The certificate of compliance (original copy) submitted to DLA Land and Maritime - VA shall affirm that the manufacturer's product meets the performance requirements of MIL-PRF-38534 and herein.

3.8 Certificate of conformance. A certificate of conformance as required in MIL-PRF-38534 shall be provided with each lot of microcircuits delivered to this drawing.

|  |                   |                             |                    |
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| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | <b>SIZE<br/>A</b> |                             | <b>5962-09202</b>  |
|  |                   | <b>REVISION LEVEL<br/>B</b> | <b>SHEET<br/>4</b> |

TABLE I. Electrical performance characteristics.

| Test                      | Symbol                       | Conditions <u>1/ 2/ 3/</u><br>-55°C ≤ T <sub>C</sub> ≤ +125°C<br>unless otherwise specified | Group A<br>subgroups        | Device<br>type | Limits |     | Unit |    |
|---------------------------|------------------------------|---|-----------------------------|----------------|--------|-----|------|----|
|                           |                              |   |                             |                | Min    | Max |      |    |
| Supply currents           | +I <sub>EE</sub>             | V <sub>EN(0-63)</sub> = V <sub>A(0-3)</sub> = V <sub>B(0-3)</sub> = 0                       | 1,2,3                       | 01             | 0      | 3   | mA   |    |
|                           |                              |   |                             | 02             | 0      | 2   |      |    |
|                           | -I <sub>EE</sub>             | V <sub>EN(0-63)</sub> = V <sub>A(0-3)</sub> = V <sub>B(0-3)</sub> = 0                       | 1,2,3                       | 01             | -3     | 0   | mA   |    |
|                           |                              |   |                             | 02             | -2     | 0   |      |    |
|                           | +I <sub>SBY</sub>            | V <sub>EN(0-63)</sub> = 4 V, V <sub>A(0-3)</sub> = V <sub>B(0-3)</sub> = 0 <u>4/</u>        | 1,2,3                       | 01             | 0      | 3   | mA   |    |
|                           |                              |   |                             | 02             | 0      | 2   |      |    |
|                           | -I <sub>SBY</sub>            | V <sub>EN(0-63)</sub> = 4 V, V <sub>A(0-3)</sub> = V <sub>B(0-3)</sub> = 0 <u>4/</u>        | 1,2,3                       | 01             | -3     | 0   | mA   |    |
|                           |                              |   |                             | 02             | -2     | 0   |      |    |
| Address input<br>currents | I <sub>AL(0-3)B</sub>        | V <sub>B</sub> = 0 V <u>2/</u>  | 1,2,3                       | 01,02          | -2     | 2   | μA   |    |
|                           | I <sub>AH(0-3)B</sub>        | V <sub>B</sub> = 5 V <u>2/</u>  | 1,2,3                       | 01,02          | -2     | 2   | μA   |    |
|                           | I <sub>AL(0-3)A</sub>        | V <sub>A</sub> = 0 V <u>2/</u>  | 1,2,3                       | 01             | -4     | 4   | μA   |    |
|                           |                              |   |                             | 02             | -2     | 2   |      |    |
|                           | I <sub>AH(0-3)A</sub>        | V <sub>A</sub> = 5 V <u>2/</u>  | 1,2,3                       | 01             | -4     | 4   | μA   |    |
|                           |                              |   |                             | 02             | -2     | 2   |      |    |
|                           | Enable input<br>current      | I <sub>ENL(0-15)</sub>  | V <sub>EN(0-15)</sub> = 0 V | 1,2,3          | 01,02  | -1  | 1    | μA |
|                           |                              | I <sub>ENH(0-15)</sub>  | V <sub>EN(0-15)</sub> = 5 V | 1,2,3          | 01,02  | -1  | 1    | μA |
| I <sub>ENL(16-31)</sub>   |                              | V <sub>EN(16-31)</sub> = 0 V  | 1,2,3                       | 01,02          | -1     | 1   | μA   |    |
| I <sub>ENH(16-31)</sub>   |                              | V <sub>EN(16-31)</sub> = 5 V  | 1,2,3                       | 01,02          | -1     | 1   | μA   |    |
| I <sub>ENL(32-47)</sub>   |                              | V <sub>EN(32-47)</sub> = 0 V  | 1,2,3                       | 01             | -2     | 2   | μA   |    |
|                           |                              |   |                             | 02             | -1     | 1   |      |    |
| I <sub>ENH(32-47)</sub>   |                              | V <sub>EN(32-47)</sub> = 5 V  | 1,2,3                       | 01             | -2     | 2   | μA   |    |
|                           |                              |   |                             | 02             | -1     | 1   |      |    |
| I <sub>ENL(48-63)</sub>   |                              | V <sub>EN(48-63)</sub> = 0 V  | 1,2,3                       | 01             | -2     | 2   | μA   |    |
|                           |                              |   |                             | 02             | -1     | 1   |      |    |
| I <sub>ENH(48-63)</sub>   | V <sub>EN(48-63)</sub> = 5 V | 1,2,3   | 01                          | -2             | 2      | μA  |      |    |
|                           |                              |   | 02                          | -1             | 1      |     |      |    |

See footnotes at end of table.

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|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>5</b> |

TABLE I. Electrical performance characteristics - Continued.

| Test  | Symbol                         | Conditions <u>1/ 2/ 3/</u><br>-55°C ≤ T <sub>C</sub> ≤ +125°C<br>unless otherwise specified              | Group A<br>subgroups | Device<br>type | Limits |       | Unit |
|---|--------------------------------|--|----------------------|----------------|--------|-------|------|
|   |                                |  |                      |                | Min    | Max   |      |
| Positive input<br>leakage current<br>(CH0-CH63)   | +I <sub>SOFFOUTPUT(ALL)</sub>  | V <sub>IN</sub> = +10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = -10 V<br><u>5/ 6/</u>  | 1,2,3                | 01,02          | -100   | +1000 | nA   |
|   | +I <sub>SOFFCURRENT(ALL)</sub> | V <sub>IN</sub> = +10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = -10 V<br><u>5/ 6/</u>  | 1,2,3                | 01,02          | -100   | +1000 | nA   |
| Negative input<br>leakage current<br>(CH0-CH63)   | -I <sub>SOFFOUTPUT(ALL)</sub>  | V <sub>IN</sub> = -10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = +10 V<br><u>5/ 6/</u>  | 1,2,3                | 01,02          | -100   | +1000 | nA   |
|   | -I <sub>SOFFCURRENT(ALL)</sub> | V <sub>IN</sub> = -10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = +10 V<br><u>5/ 6/</u>  | 1,2,3                | 01,02          | -100   | +1000 | nA   |
| Output leakage<br>current outputs<br>(pins 25, 26,<br>68, and 70)<br>Currents (pins<br>67 and 69<br>Device Type 01<br>only) | +I <sub>DOFFOUTPUT(ALL)</sub>  | V <sub>OUT</sub> = +10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = -10 V<br><u>6/ 7/</u> | 1,2,3                | 01,02          | -100   | +100  | nA   |
|   | +I <sub>DOFFCURRENT(ALL)</sub> | V <sub>OUT</sub> = +10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = -10 V<br><u>6/ 7/</u> | 1,2,3                | 01,02          | -100   | +100  | nA   |
|   | -I <sub>DOFFOUTPUT(ALL)</sub>  | V <sub>OUT</sub> = -10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = +10 V<br><u>6/ 7/</u> | 1,2,3                | 01,02          | -100   | +100  | nA   |
|   | -I <sub>DOFFCURRENT(ALL)</sub> | V <sub>OUT</sub> = -10 V, V <sub>EN</sub> = 4 V, output<br>and all unused inputs = +10 V<br><u>6/ 7/</u> | 1,2,3                | 01,02          | -100   | +100  | nA   |
| Input clamped<br>voltage<br>(CH0-CH63)  | +V <sub>CLMP(0-63)</sub>       | V <sub>EN</sub> = 4 V, all unused inputs are<br>open <u>6/ 8/</u>  | 1                    | 01,02          | 18.0   | 23.0  | V    |
|   |                                |  | 2                    |                | 18.0   | 23.5  |      |
|   |                                |  | 3                    |                | 17.5   | 22.5  |      |
|   | -V <sub>CLMP(0-63)</sub>       | V <sub>EN</sub> = 4 V, all unused inputs are<br>open <u>6/ 8/</u>  | 1                    | 01,02          | -23.0  | -18.0 | V    |
|   |                                |  | 2                    |                | -23.5  | -18.0 |      |
|   |                                |  | 3                    |                | -22.5  | -17.5 |      |

See footnotes at end of table.

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|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>6</b> |

TABLE I. Electrical performance characteristics - Continued.

| Test  | Symbol   | Conditions <u>1/</u> <u>2/</u> <u>3/</u><br>-55°C ≤ T <sub>C</sub> ≤ +125°C<br>unless otherwise specified   | Group A<br>subgroups | Device<br>type | Limits |      | Unit |
|---|--|---|----------------------|----------------|--------|------|------|
|   |  |   |                      |                | Min    | Max  |      |
| Switch ON<br>resistance outputs<br>(pins 25, 26, 68,<br>and 70)               | R <sub>DS(ON)(0-63)A</sub>                                     | V <sub>IN</sub> = +15 V, V <sub>EN</sub> = 0.8 V,<br>I <sub>OUT</sub> = -1 mA <u>5/</u> <u>6/</u> <u>9/</u> | 1,2,3                | 01,02          | 200    | 1000 | Ω    |
|   | R <sub>DS(ON)(0-63)B</sub>                                     | V <sub>IN</sub> = +5 V, V <sub>EN</sub> = 0.8 V,<br>I <sub>OUT</sub> = -1 mA <u>5/</u> <u>6/</u> <u>9/</u>  | 1,2,3                | 01,02          | 200    | 1500 | Ω    |
|   | R <sub>DS(ON)(0-63)C</sub>                                     | V <sub>IN</sub> = -5 V, V <sub>EN</sub> = 0.8 V,<br>I <sub>OUT</sub> = +1 mA <u>5/</u> <u>6/</u> <u>9/</u>  | 1,2,3                | 01,02          | 200    | 2500 | Ω    |
| Switch ON<br>resistance outputs<br>(pins 67 and 69<br>Device type 01<br>only) | R <sub>DS(ON)(32-63)A</sub>                                    | V <sub>IN</sub> = +15 V, V <sub>EN</sub> = 0.8 V,<br>I <sub>OUT</sub> = -1 mA <u>5/</u> <u>6/</u> <u>9/</u> | 1,2,3                | 01             | 200    | 1000 | Ω    |
|   | R <sub>DS(ON)(32-63)B</sub>                                    | V <sub>IN</sub> = +5 V, V <sub>EN</sub> = 0.8 V,<br>I <sub>OUT</sub> = -1 mA <u>5/</u> <u>6/</u> <u>9/</u>  | 1,2,3                | 01             | 200    | 1500 | Ω    |
|   | R <sub>DS(ON)(32-63)C</sub>                                    | V <sub>IN</sub> = -5 V, V <sub>EN</sub> = 0.8 V,<br>I <sub>OUT</sub> = +1 mA <u>5/</u> <u>6/</u> <u>9/</u>  | 1,2,3                | 01             | 200    | 2500 | Ω    |
| Switching tests   | t <sub>AHL</sub>   | R <sub>L</sub> = 10 kΩ, C <sub>L</sub> = 50 pF,<br>See figure 4   | 9,10,11              | 01,02          | 10     | 1000 | ns   |
|   | t <sub>ALH</sub>   | R <sub>L</sub> = 10 kΩ, C <sub>L</sub> = 50 pF,<br>See figure 4   | 9,10                 | 01,02          | 10     | 1000 | ns   |
|   |  |   | 11                   |                | 10     | 1000 |      |
|   | t <sub>ONEN</sub>  | R <sub>L</sub> = 1 kΩ, C <sub>L</sub> = 50 pF,<br>See figure 4  | 9,10,11              | 01,02          | 10     | 1000 | ns   |
| t <sub>OFFEN</sub>  | R <sub>L</sub> = 1 kΩ, C <sub>L</sub> = 50 pF,<br>See figure 4 | 9,10,11   | 01,02                | 10             | 1000   | ns   |      |

- 1/ +V<sub>EE</sub> = +15 V dc, -V<sub>EE</sub> = -15 V dc, and V<sub>REF</sub> = +5 V dc, unless otherwise specified. Recommended power supply turn on sequence -V<sub>EE</sub>, V<sub>REF</sub>, followed by +V<sub>EE</sub>.
- 2/ Measure inputs sequentially. Ground all unused inputs. V<sub>A</sub> is the applied input voltage to the address lines A(0-3). V<sub>B</sub> is the applied input voltage to the address lines B(0-3).
- 3/ The devices cannot be operated with analog inputs from -15 to -5 volts.
- 4/ If not tested, shall be guaranteed to the limits specified in table I.
- 5/ V<sub>IN</sub> is the applied input voltage to the input channels (CH0-CH63).
- 6/ V<sub>EN</sub> is the applied input voltage to the enable lines EN(0-15), EN(16-31), EN(32-47), and EN(48-63).
- 7/ V<sub>OUT</sub> is the applied input voltage to the output lines (OUTPUT(0-15), OUTPUT(16-31), OUTPUT(32-47), OUTPUT(48-63), CURRENT(32-47), and CURRENT(48-63). (Current outputs for device type 01 only).
- 8/ Clamping test performed at ±25 V dc and a 2 kΩ limiting resistor between the input and the power supply.
- 9/ Negative current is the current flowing out of each of the pins. Positive current is the current flowing into each of the pins.

|  |                  |                            |                   |
|--|------------------|----------------------------|-------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b> |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>7</b> |

Case outline X.

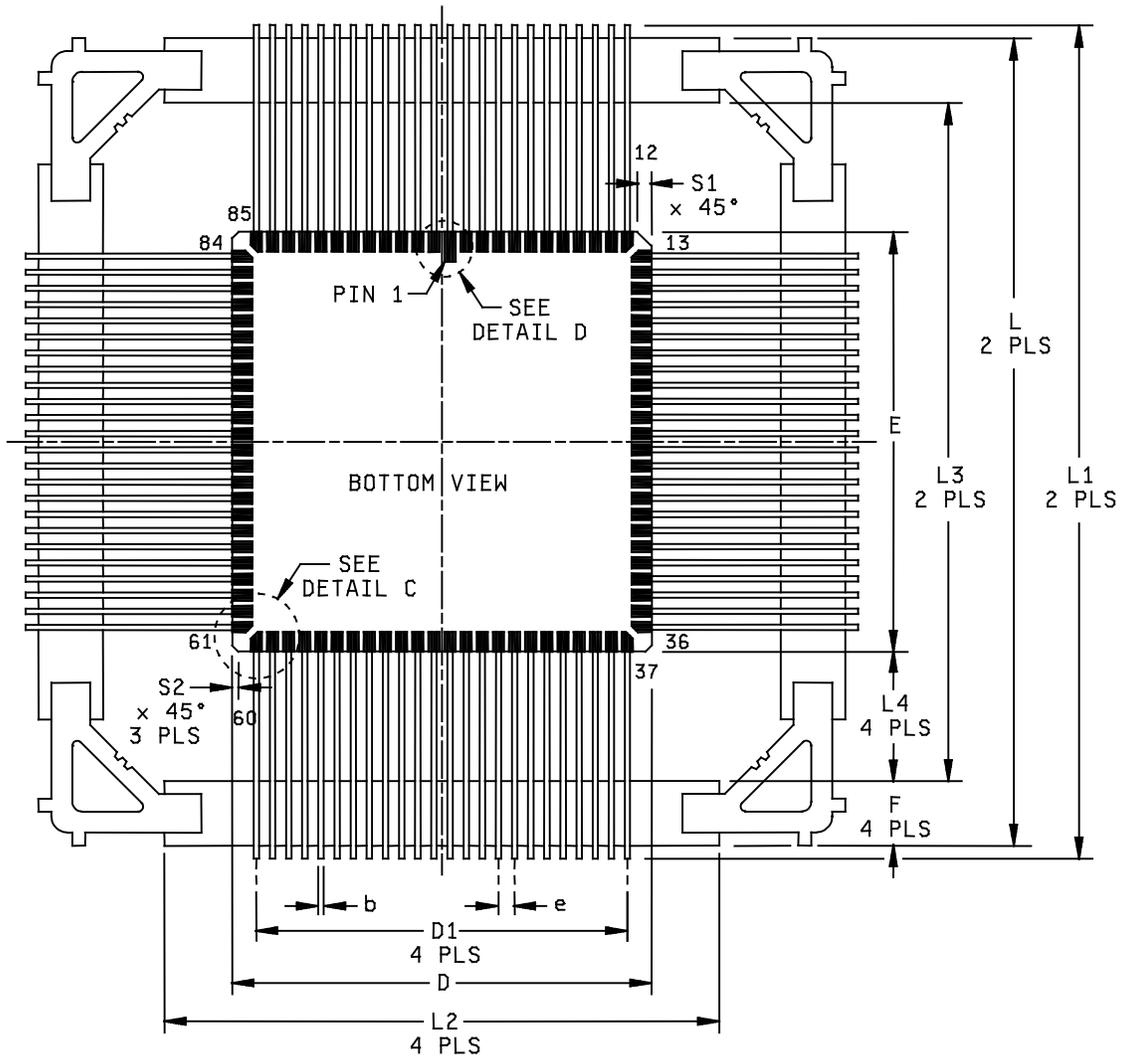


FIGURE 1. Case outline(s).

|  |                  |                            |                   |
|--|------------------|----------------------------|-------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b> |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>8</b> |

Case outline X - Continued.

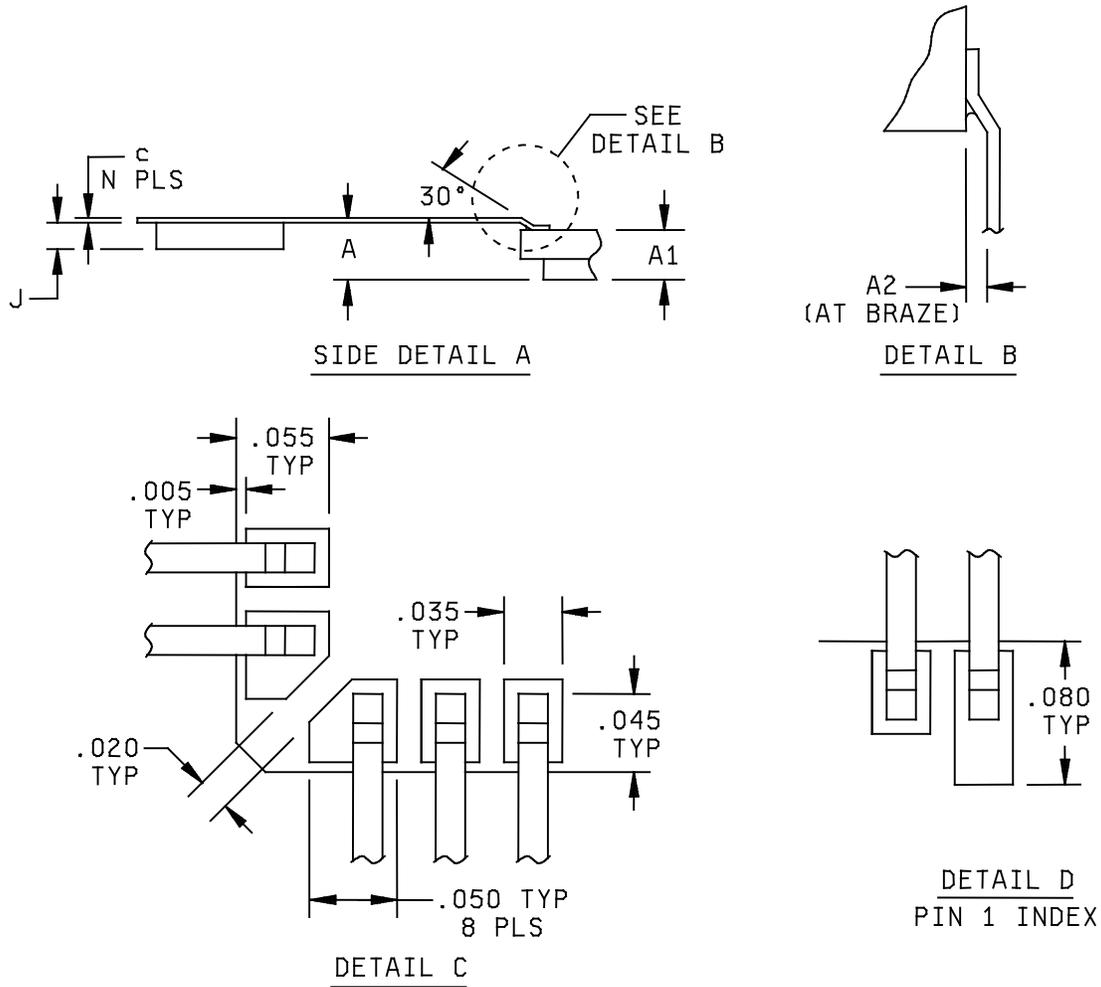


FIGURE 1. Case outline(s) - Continued.

|  |                  |                            |                   |
|--|------------------|----------------------------|-------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b> |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>9</b> |

Case outline X - Continued.

| Symbol | Inches   |       | Millimeters |       |
|--------|----------|-------|-------------|-------|
|        | Min      | Max   | Min         | Max   |
| A      |          | .200  |             | 5.08  |
| A1     |          | .180  |             | 4.57  |
| A2     | .005     | .011  | 0.13        | 0.28  |
| b      | .0135    | .0195 | 0.34        | 0.50  |
| c      | .005     | .008  | 0.13        | 0.20  |
| D/E    | 1.287    | 1.313 | 32.69       | 33.35 |
| D1     | 1.145    | 1.155 | 29.08       | 29.34 |
| e      | .050 BSC |       | 1.27 BSC    |       |
| F      | .200 TYP |       | 5.08 TYP    |       |
| J      | .035 TYP |       | 0.89 TYP    |       |
| L      | 2.490    | 2.510 | 63.25       | 63.75 |
| L1     |          | 2.580 |             | 65.53 |
| L2     | 1.700    | 1.740 | 43.18       | 44.20 |
| L3     | 2.090    | 2.110 | 53.09       | 53.59 |
| L4     | .400 TYP |       | 10.16 TYP   |       |
| N      | 96       |       | 96          |       |
| S1     | .030 TYP |       | 0.76 TYP    |       |
| S2     | .015 TYP |       | 0.38 TYP    |       |

NOTES:

1. Pin 1 is indicated by an ESD triangle on top of the package and by an index on the bottom of the package.
2. The U.S. preferred system of measurement is the metric SI. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall rule.
3. N equals 96, the total number of leads on the package.
4. Pin numbers are for reference only.

FIGURE 1. Case outline(s) - Continued.

|  |                  |                            |                    |
|--|------------------|----------------------------|--------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>10</b> |

| Device type     | 01                     |                 |                  |                 |                        |
|-----------------|------------------------|-----------------|------------------|-----------------|------------------------|
| Case outline    | X                      |                 |                  |                 |                        |
| Terminal number | Terminal symbol        | Terminal number | Terminal symbol  | Terminal number | Terminal symbol        |
| 1               | A2                     | 33              | CH11             | 65              | CH49                   |
| 2               | B2                     | 34              | CH27             | 66              | CH48                   |
| 3               | A3                     | 35              | CH12             | 67              | OUTPUT I(48-63)        |
| 4               | B3                     | 36              | CH28             | 68              | OUTPUT V(48-63)        |
| 5               | $\overline{EN}(0-15)$  | 37              | CH13             | 69              | OUTPUT I(32-47)        |
| 6               | $\overline{EN}(16-31)$ | 38              | CH29             | 70              | OUTPUT V(32-47)        |
| 7               | CH0                    | 39              | CH14             | 71              | GND                    |
| 8               | CH16                   | 40              | CH30             | 72              | GND                    |
| 9               | CH1                    | 41              | CH15             | 73              | CH47                   |
| 10              | CH17                   | 42              | CH31             | 74              | CH46                   |
| 11              | CH2                    | 43              | NC               | 75              | CH45                   |
| 12              | CH18                   | 44              | +V <sub>EE</sub> | 76              | CH44                   |
| 13              | CH3                    | 45              | NC               | 77              | CH43                   |
| 14              | CH19                   | 46              | -V <sub>EE</sub> | 78              | CH42                   |
| 15              | CH4                    | 47              | NC               | 79              | CH41                   |
| 16              | CH20                   | 48              | V <sub>REF</sub> | 80              | CH40                   |
| 17              | CH5                    | 49              | NC               | 81              | CH39                   |
| 18              | CH21                   | 50              | Case GND         | 82              | CH38                   |
| 19              | CH6                    | 51              | CH63             | 83              | CH37                   |
| 20              | CH22                   | 52              | CH62             | 84              | CH36                   |
| 21              | CH7                    | 53              | CH61             | 85              | CH35                   |
| 22              | CH23                   | 54              | CH60             | 86              | CH34                   |
| 23              | GND                    | 55              | CH59             | 87              | CH33                   |
| 24              | GND                    | 56              | CH58             | 88              | CH32                   |
| 25              | OUTPUT V(0-15)         | 57              | CH57             | 89              | GND                    |
| 26              | OUTPUT V(16-31)        | 58              | CH56             | 90              | GND                    |
| 27              | CH8                    | 59              | CH55             | 91              | $\overline{EN}(48-63)$ |
| 28              | CH24                   | 60              | CH54             | 92              | $\overline{EN}(32-47)$ |
| 29              | CH9                    | 61              | CH53             | 93              | A0                     |
| 30              | CH25                   | 62              | CH52             | 94              | B0                     |
| 31              | CH10                   | 63              | CH51             | 95              | A1                     |
| 32              | CH26                   | 64              | CH50             | 96              | B1                     |

NOTE: NC is a no connect pin. NC pins should be grounded to eliminate or minimize electrostatic discharge (ESD) or static buildup.

FIGURE 2. Terminal connections.

|  |                  |                            |                    |
|--|------------------|----------------------------|--------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>11</b> |

| Device type     | 02                     |                 |                  |                 |                        |
|-----------------|------------------------|-----------------|------------------|-----------------|------------------------|
| Case outline    | X                      |                 |                  |                 |                        |
| Terminal number | Terminal symbol        | Terminal number | Terminal symbol  | Terminal number | Terminal symbol        |
| 1               | A2                     | 33              | CH11             | 65              | CH49                   |
| 2               | B2                     | 34              | CH27             | 66              | CH48                   |
| 3               | A3                     | 35              | CH12             | 67              | NC                     |
| 4               | B3                     | 36              | CH28             | 68              | OUTPUT V(48-63)        |
| 5               | $\overline{EN}(0-15)$  | 37              | CH13             | 69              | NC                     |
| 6               | $\overline{EN}(16-31)$ | 38              | CH29             | 70              | OUTPUT V(32-47)        |
| 7               | CH0                    | 39              | CH14             | 71              | GND                    |
| 8               | CH16                   | 40              | CH30             | 72              | GND                    |
| 9               | CH1                    | 41              | CH15             | 73              | CH47                   |
| 10              | CH17                   | 42              | CH31             | 74              | CH46                   |
| 11              | CH2                    | 43              | NC               | 75              | CH45                   |
| 12              | CH18                   | 44              | +V <sub>EE</sub> | 76              | CH44                   |
| 13              | CH3                    | 45              | NC               | 77              | CH43                   |
| 14              | CH19                   | 46              | -V <sub>EE</sub> | 78              | CH42                   |
| 15              | CH4                    | 47              | NC               | 79              | CH41                   |
| 16              | CH20                   | 48              | V <sub>REF</sub> | 80              | CH40                   |
| 17              | CH5                    | 49              | NC               | 81              | CH39                   |
| 18              | CH21                   | 50              | Case GND         | 82              | CH38                   |
| 19              | CH6                    | 51              | CH63             | 83              | CH37                   |
| 20              | CH22                   | 52              | CH62             | 84              | CH36                   |
| 21              | CH7                    | 53              | CH61             | 85              | CH35                   |
| 22              | CH23                   | 54              | CH60             | 86              | CH34                   |
| 23              | GND                    | 55              | CH59             | 87              | CH33                   |
| 24              | GND                    | 56              | CH58             | 88              | CH32                   |
| 25              | OUTPUT V(0-15)         | 57              | CH57             | 89              | GND                    |
| 26              | OUTPUT V(16-31)        | 58              | CH56             | 90              | GND                    |
| 27              | CH8                    | 59              | CH55             | 91              | $\overline{EN}(48-63)$ |
| 28              | CH24                   | 60              | CH54             | 92              | $\overline{EN}(32-47)$ |
| 29              | CH9                    | 61              | CH53             | 93              | A0                     |
| 30              | CH25                   | 62              | CH52             | 94              | B0                     |
| 31              | CH10                   | 63              | CH51             | 95              | A1                     |
| 32              | CH26                   | 64              | CH50             | 96              | B1                     |

NOTE: NC is a no connect pin. NC pins should be grounded to eliminate or minimize electrostatic discharge (ESD) or static buildup.

FIGURE 2. Terminal connections.

|  |                  |                            |                    |
|--|------------------|----------------------------|--------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>12</b> |

| Truth table (CH0-CH15) and (CH16-CH31) |    |    |    |                       |                 |                        |                 |
|--|----|----|----|-----------------------|-----------------|------------------------|-----------------|
| B3                                     | B2 | B1 | B0 | $\overline{EN}(0-15)$ | "ON" Channel 1/ | $\overline{EN}(16-31)$ | "ON" Channel 2/ |
| X                                      | X  | X  | X  | H                     | None            | H                      | None            |
| L                                      | L  | L  | L  | L                     | CH0             | L                      | CH16            |
| L                                      | L  | L  | H  | L                     | CH1             | L                      | CH17            |
| L                                      | L  | H  | L  | L                     | CH2             | L                      | CH18            |
| L                                      | L  | H  | H  | L                     | CH3             | L                      | CH19            |
| L                                      | H  | L  | L  | L                     | CH4             | L                      | CH20            |
| L                                      | H  | L  | H  | L                     | CH5             | L                      | CH21            |
| L                                      | H  | H  | L  | L                     | CH6             | L                      | CH22            |
| L                                      | H  | H  | H  | L                     | CH7             | L                      | CH23            |
| H                                      | L  | L  | L  | L                     | CH8             | L                      | CH24            |
| H                                      | L  | L  | H  | L                     | CH9             | L                      | CH25            |
| H                                      | L  | H  | L  | L                     | CH10            | L                      | CH26            |
| H                                      | L  | H  | H  | L                     | CH11            | L                      | CH27            |
| H                                      | H  | L  | L  | L                     | CH12            | L                      | CH28            |
| H                                      | H  | L  | H  | L                     | CH13            | L                      | CH29            |
| H                                      | H  | H  | L  | L                     | CH14            | L                      | CH30            |
| H                                      | H  | H  | H  | L                     | CH15            | L                      | CH31            |

- 1/ Between (CH0-CH15) and OUTPUT(0-15).  
 2/ Between (CH16-CH31) and OUTPUT(16-31).

| Truth table (CH32-CH47) and (CH48-CH63) |    |    |    |                        |                 |                        |                 |
|---|----|----|----|------------------------|-----------------|------------------------|-----------------|
| A3                                      | A2 | A1 | A0 | $\overline{EN}(32-47)$ | "ON" Channel 1/ | $\overline{EN}(48-63)$ | "ON" Channel 2/ |
| X                                       | X  | X  | X  | H                      | None            | H                      | None            |
| L                                       | L  | L  | L  | L                      | CH32            | L                      | CH48            |
| L                                       | L  | L  | H  | L                      | CH33            | L                      | CH49            |
| L                                       | L  | H  | L  | L                      | CH34            | L                      | CH50            |
| L                                       | L  | H  | H  | L                      | CH35            | L                      | CH51            |
| L                                       | H  | L  | L  | L                      | CH36            | L                      | CH52            |
| L                                       | H  | L  | H  | L                      | CH37            | L                      | CH53            |
| L                                       | H  | H  | L  | L                      | CH38            | L                      | CH54            |
| L                                       | H  | H  | H  | L                      | CH39            | L                      | CH55            |
| H                                       | L  | L  | L  | L                      | CH40            | L                      | CH56            |
| H                                       | L  | L  | H  | L                      | CH41            | L                      | CH57            |
| H                                       | L  | H  | L  | L                      | CH42            | L                      | CH58            |
| H                                       | L  | H  | H  | L                      | CH43            | L                      | CH59            |
| H                                       | H  | L  | L  | L                      | CH44            | L                      | CH60            |
| H                                       | H  | L  | H  | L                      | CH45            | L                      | CH61            |
| H                                       | H  | H  | L  | L                      | CH46            | L                      | CH62            |
| H                                       | H  | H  | H  | L                      | CH47            | L                      | CH63            |

- 1/ Between (CH32-CH47) and OUTPUT(32-47) and CURRENT(32-47).  
 2/ Between (CH48-CH63) and OUTPUT(48-63) and CURRENT(48-63).

FIGURE 3. Truth table(s). (Device type 01).

|  |                  |                            |                    |
|--|------------------|----------------------------|--------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>13</b> |

| Truth table (CH0-CH15) and (CH16-CH31) |    |    |    |                       |                         |                        |                         |
|--|----|----|----|-----------------------|-------------------------|------------------------|-------------------------|
| B3                                     | B2 | B1 | B0 | $\overline{EN}(0-15)$ | "ON" Channel <u>1</u> / | $\overline{EN}(16-31)$ | "ON" Channel <u>2</u> / |
| X                                      | X  | X  | X  | H                     | None                    | H                      | None                    |
| L                                      | L  | L  | L  | L                     | CH0                     | L                      | CH16                    |
| L                                      | L  | L  | H  | L                     | CH1                     | L                      | CH17                    |
| L                                      | L  | H  | L  | L                     | CH2                     | L                      | CH18                    |
| L                                      | L  | H  | H  | L                     | CH3                     | L                      | CH19                    |
| L                                      | H  | L  | L  | L                     | CH4                     | L                      | CH20                    |
| L                                      | H  | L  | H  | L                     | CH5                     | L                      | CH21                    |
| L                                      | H  | H  | L  | L                     | CH6                     | L                      | CH22                    |
| L                                      | H  | H  | H  | L                     | CH7                     | L                      | CH23                    |
| H                                      | L  | L  | L  | L                     | CH8                     | L                      | CH24                    |
| H                                      | L  | L  | H  | L                     | CH9                     | L                      | CH25                    |
| H                                      | L  | H  | L  | L                     | CH10                    | L                      | CH26                    |
| H                                      | L  | H  | H  | L                     | CH11                    | L                      | CH27                    |
| H                                      | H  | L  | L  | L                     | CH12                    | L                      | CH28                    |
| H                                      | H  | L  | H  | L                     | CH13                    | L                      | CH29                    |
| H                                      | H  | H  | L  | L                     | CH14                    | L                      | CH30                    |
| H                                      | H  | H  | H  | L                     | CH15                    | L                      | CH31                    |

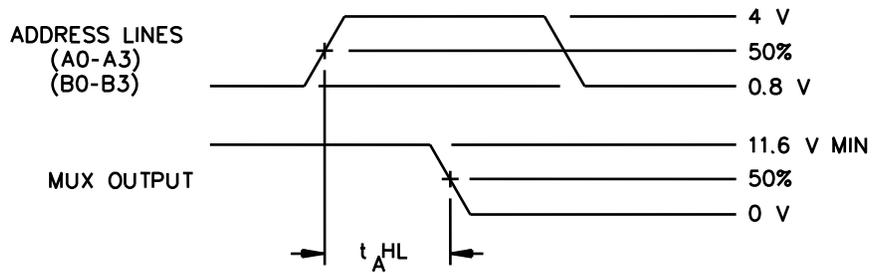
- 1/ Between (CH0-CH15) and OUTPUT(0-15).  
2/ Between (CH16-CH31) and OUTPUT(16-31).

| Truth table (CH32-CH47) and (CH48-CH63) |    |    |    |                        |                         |                        |                         |
|---|----|----|----|------------------------|-------------------------|------------------------|-------------------------|
| A3                                      | A2 | A1 | A0 | $\overline{EN}(32-47)$ | "ON" Channel <u>1</u> / | $\overline{EN}(48-63)$ | "ON" Channel <u>2</u> / |
| X                                       | X  | X  | X  | H                      | None                    | H                      | None                    |
| L                                       | L  | L  | L  | L                      | CH32                    | L                      | CH48                    |
| L                                       | L  | L  | H  | L                      | CH33                    | L                      | CH49                    |
| L                                       | L  | H  | L  | L                      | CH34                    | L                      | CH50                    |
| L                                       | L  | H  | H  | L                      | CH35                    | L                      | CH51                    |
| L                                       | H  | L  | L  | L                      | CH36                    | L                      | CH52                    |
| L                                       | H  | L  | H  | L                      | CH37                    | L                      | CH53                    |
| L                                       | H  | H  | L  | L                      | CH38                    | L                      | CH54                    |
| L                                       | H  | H  | H  | L                      | CH39                    | L                      | CH55                    |
| H                                       | L  | L  | L  | L                      | CH40                    | L                      | CH56                    |
| H                                       | L  | L  | H  | L                      | CH41                    | L                      | CH57                    |
| H                                       | L  | H  | L  | L                      | CH42                    | L                      | CH58                    |
| H                                       | L  | H  | H  | L                      | CH43                    | L                      | CH59                    |
| H                                       | H  | L  | L  | L                      | CH44                    | L                      | CH60                    |
| H                                       | H  | L  | H  | L                      | CH45                    | L                      | CH61                    |
| H                                       | H  | H  | L  | L                      | CH46                    | L                      | CH62                    |
| H                                       | H  | H  | H  | L                      | CH47                    | L                      | CH63                    |

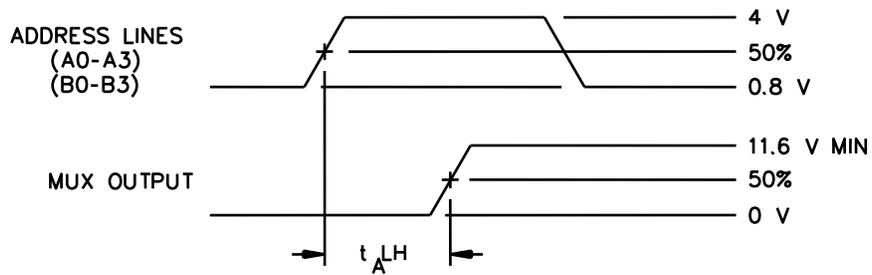
- 1/ Between (CH32-CH47) and OUTPUT(32-47).  
2/ Between (CH48-CH63) and OUTPUT(48-63).

FIGURE 3. Truth table(s). (Device type 02)

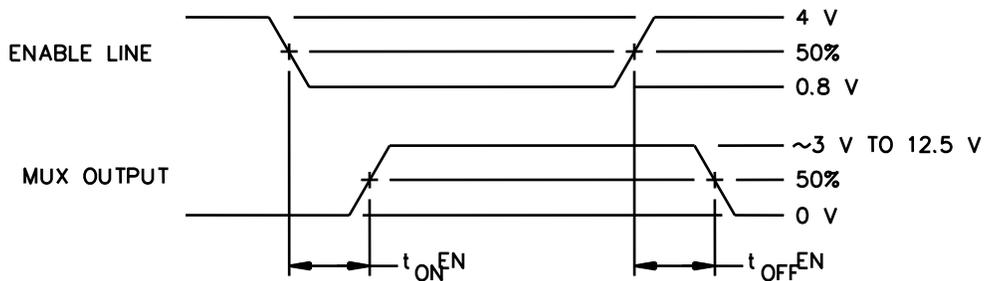
|  |                  |                            |                    |
|--|------------------|----------------------------|--------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>14</b> |



DEFINITION OF  $t_{AHL}$



DEFINITION OF  $t_{ALH}$



DEFINITION OF  $t_{ONEN}$  AND  $t_{OFFEN}$

NOTE:  $f = 10 \text{ kHz}$ , duty cycle = 50%.

FIGURE 4. Switching test waveform(s).

|  |                  |                            |                    |
|--|------------------|----------------------------|--------------------|
| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>15</b> |

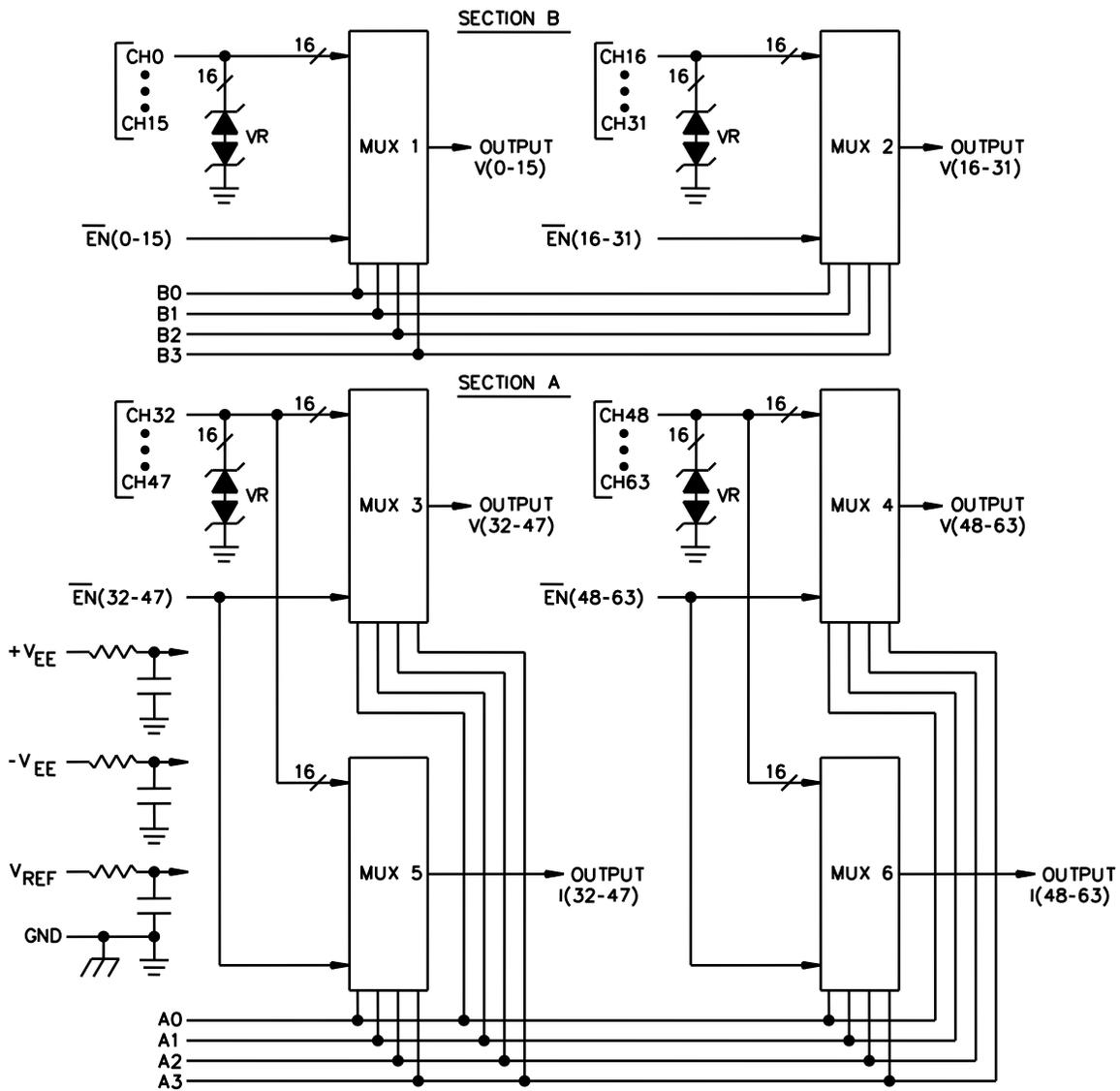


FIGURE 5. Block diagram. (Device Type 01)

**STANDARD  
MICROCIRCUIT DRAWING**

DLA LAND AND MARITIME  
COLUMBUS, OHIO 43218-3990

SIZE  
**A**

REVISION LEVEL  
**B**

**5962-09202**

SHEET  
**16**

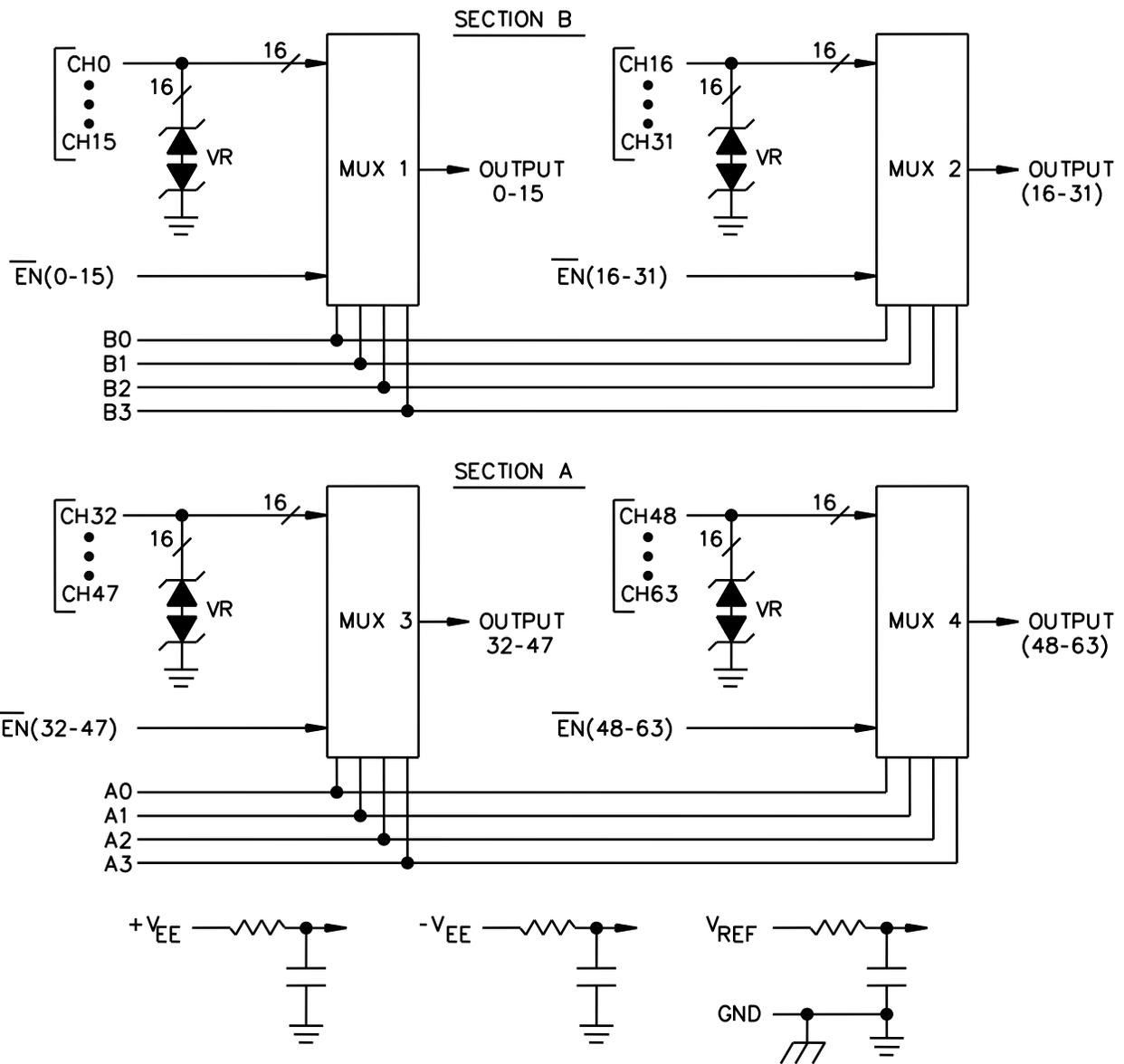


FIGURE 5. Block diagram - Continued. (Device Type 02)

**STANDARD  
MICROCIRCUIT DRAWING**

DLA LAND AND MARITIME  
COLUMBUS, OHIO 43218-3990

SIZE  
**A**

REVISION LEVEL  
**B**

**5962-09202**

SHEET  
**17**

TABLE II. Electrical test requirements.

|  |   |
|--|---|
| MIL-PRF-38534 test requirements  | Subgroups<br>(in accordance with<br>MIL-PRF-38534, group A<br>test table) |
| Interim electrical parameters  | 1, 9  |
| Final electrical parameters  | 1*, 2, 3, 9, 10, 11   |
| Group A test requirements  | 1, 2, 3, 9, 10, 11  |
| Group C end-point electrical<br>parameters   | 1, 2, 3, 9, 10, 11  |
| End-point electrical parameters<br>for radiation hardness assurance<br>(RHA) devices | Not applicable  |

\* PDA applies to subgroup 1.

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with MIL-PRF-38534 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein.

4.2 Screening. Screening shall be in accordance with MIL-PRF-38534. The following additional criteria shall apply:

- a. Burn-in test, method 1015 of MIL-STD-883.
  - (1) Test condition A, B, C, or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to either DLA Land and Maritime - VA or the acquiring activity upon request. Also, the test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.
  - (2) T<sub>A</sub> as specified in accordance with table I of method 1015 of MIL-STD-883.
- b. Interim and final electrical test parameters shall be as specified in table II herein, except interim electrical parameter tests prior to burn-in are optional at the discretion of the manufacturer.

4.3 Conformance and periodic inspections. Conformance inspection (CI) and periodic inspection (PI) shall be in accordance with MIL-PRF-38534 and as specified herein.

4.3.1 Group A inspection (CI). Group A inspection shall be in accordance with MIL-PRF-38534 and as follows:

- a. Tests shall be as specified in table II herein.
- b. Subgroups 4, 5, 6, 7, and 8 shall be omitted.

4.3.2 Group B inspection (PI). Group B inspection shall be in accordance with MIL-PRF-38534.

|  |                  |                            |                    |
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| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
|  |                  | REVISION LEVEL<br><b>B</b> | SHEET<br><b>18</b> |

4.3.3 Group C inspection (PI). Group C inspection shall be in accordance with MIL-PRF-38534 and as follows:

- a. End-point electrical parameters shall be as specified in table II herein.
- b. Steady-state life test, method 1005 of MIL-STD-883.
  - (1) Test condition A, B, C, or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to either DLA Land and Maritime - VA or the acquiring activity upon request. Also, the test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.
  - (2)  $T_A$  as specified in accordance with table I of method 1005 of MIL-STD-883.
  - (3) Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

4.3.4 Group D inspection (PI). Group D inspection shall be in accordance with MIL-PRF-38534.

4.3.5 Radiation Hardness Assurance (RHA) inspection. RHA inspection is not currently applicable to this drawing.

## 5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-PRF-38534.

## 6. NOTES

6.1 Intended use. Microcircuits conforming to this drawing are intended for use for Government microcircuit applications (original equipment), design applications, and logistics purposes.

6.2 Replaceability. Microcircuits covered by this drawing will replace the same generic device covered by a contractor-prepared specification or drawing.

6.3 Configuration control of SMD's. All proposed changes to existing SMD's will be coordinated as specified in MIL-PRF-38534.

6.4 Record of users. Military and industrial users should inform DLA Land and Maritime when a system application requires configuration control and the applicable SMD to that system. DLA Land and Maritime will maintain a record of users and this list will be used for coordination and distribution of changes to the drawings. Users of drawings covering microelectronic devices (FSC 5962) should contact DLA Land and Maritime-VA, telephone (614) 692-8108.

6.5 Comments. Comments on this drawing should be directed to DLA Land and Maritime-VA, Columbus, Ohio 43218-3990, or telephone (614) 692-1081.

6.6 Sources of supply. Sources of supply are listed in MIL-HDBK-103 and QML-38534. The vendors, listed in MIL-HDBK-103 and QML-38534, have submitted a certificate of compliance (see 3.7 herein) to DLA Land and Maritime-VA and have agreed to this drawing.

|  |                  |                            |                    |
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| <b>STANDARD<br/>MICROCIRCUIT DRAWING</b><br><br>DLA LAND AND MARITIME<br>COLUMBUS, OHIO 43218-3990 | SIZE<br><b>A</b> |                            | <b>5962-09202</b>  |
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STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 15-11-17

Approved sources of supply for SMD 5962-09202 are listed below for immediate acquisition information only and shall be added to MIL-HDBK-103 and QML-38534 during the next revisions. MIL-HDBK-103 and QML-38534 will be revised to include the addition or deletion of sources. The vendors listed below have agreed to this drawing and a certificate of compliance has been submitted to and accepted by DLA Land and Maritime -VA. This information bulletin is superseded by the next dated revisions of MIL-HDBK-103 and QML-38534. DLA Land and Maritime maintains an online database of all current sources of supply at <http://www.landandmaritime.dla.mil/Programs/Smcr/>.

| Standard microcircuit drawing PIN <u>1/</u> | Vendor CAGE number | Vendor similar PIN <u>2/</u> |
|---|--------------------|------------------------------|
| 5962-0920201KXC                             | 88379              | ACT8510-201-1S               |
| 5962-0920202KXC                             | 88379              | ACT8511-201-1S               |

- 1/ The lead finish shown for each PIN representing a hermetic package is the most readily available from the manufacturer listed for that part. If the desired lead finish is not listed contact the Vendor to determine its availability.
- 2/ Caution. Do not use this number for item acquisition. Items acquired to this number may not satisfy the performance requirements of this drawing.

Vendor CAGE number

88379

Vendor name and address

Aeroflex Plainview Incorporated,  
 (Aeroflex Microelectronics Solutions)  
 35 South Service Road  
 Plainview, NY 11803-4193

The information contained herein is disseminated for convenience only and the Government assumes no liability whatsoever for any inaccuracies in the information bulletin.