| REVISIONS | | | |
|---|---|---|---|
| LTR | DESCRIPTION | DATE | APPROVED |
| A | Update document paragraphs to current requirements. - ro | 21-09-23 | J. ESCHMEYER |

Prepared in accordance with ASME Y14.24

Vendor item drawing

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **REV** | | | | | | | | | | | | | | | | | | | | | | |
| **PAGE** | | | | | | | | | | | | | | | | | | | | | | |
| **REV** | A | | | | | | | | | | | | | | | | | | | | | |
| **PAGE** | 18 | | | | | | | | | | | | | | | | | | | | | |

| **REV STATUS OF PAGES** | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **REV** | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| **PAGE** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | | |

**PMIC N/A**

**PREPARED BY**
RICK OFFICER

**DLA LAND AND MARITIME**
**COLUMBUS, OHIO 43218-3990**
**https://www.dla.mil/LandandMaritime**

Original date of drawing
YY-MM-DD

16-07-25

**CHECKED BY**
RAJESH PITHADIA

**APPROVED BY**
CHARLES F. SAFFLE

TITLE

MICROCIRCUIT, LINEAR, 105 MHz LOW POWER, LOW NOISE, RAIL TO RAIL AMPLIFIER, MONOLITHIC SILICON

| **SIZE** | **CODE IDENT. NO.** |
|---|---|
| **A** | **16236** |

**DWG NO.**
**V62/16621**

**REV** **A**

**PAGE** 1 **OF** 18

DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

AMSC N/A

5962-V074-21

1. SCOPE

1.1 Scope. This drawing documents the general requirements of a high performance 105 MHz low power, low noise, rail to rail amplifier microcircuit, with an operating temperature range of -55°C to +125°C.

1.2 Vendor Item Drawing Administrative Control Number. The manufacturer's PIN is the item of identification. The vendor item drawing establishes an administrative control number for identifying the item on the engineering documentation:

| V62/16621 | - | 01 | X | E |
|---|---|---|---|---|
| Drawing number | | Device type (See 1.2.1) | Case outline (See 1.2.2) | Lead finish (See 1.2.3) |

1.2.1 Device type(s).

| Device type | Generic | Circuit function |
|---|---|---|
| 01 | ADA4805-2 | 105 MHz low power, low noise rail to rail amplifier |

1.2.2 Case outline(s). The case outline(s) are as specified herein.

| Outline letter | Number of pins | JEDEC PUB 95 | Package style |
|---|---|---|---|
| X | 8 | MO-187-AA | Small outline package |

1.2.3 Lead finishes. The lead finishes are as specified below or other lead finishes as provided by the device manufacturer:

| Finish designator | Material |
|---|---|
| A | Hot solder dip |
| B | Tin-lead plate |
| C | Gold plate |
| D | Palladium |
| E | Gold flash palladium |
| F | Tin-lead alloy (BGA/CGA) |
| Z | Other |

1.3 Absolute maximum ratings. 1/

| | |
|---|---|
| Supply voltage ($V_S$) | 11 V |
| Power dissipation ($P_D$) | See figure 3 |
| Common mode input voltage | $-V_S$ – 0.7 V to $+V_S$ + 0.7 V |
| Differential input voltage | ±1 V |
| Storage temperature range ($T_{STG}$) | -65°C to +125°C |
| Lead temperature (soldering, 10 seconds) | 300°C |
| Junction temperature ($T_J$) | 150°C |
| Thermal resistance, junction to ambient ($\theta_{JA}$) | 123.8°C/W |
| Thermal resistance, junction to board ($\theta_{JB}$) | 136.8°C/W |
| Thermal resistance, junction to case ($\theta_{JC}$) | 68.52°C/W |

1.4 Recommended operating conditions. 2/

| | |
|---|---|
| Supply voltage range ($V_S$) | -5 V to +5 V |
| Operating free-air temperature range ($T_A$) | -55°C to +125°C |

1/ Stresses beyond those listed under “absolute maximum rating” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under “recommended operating conditions” is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

2/ Use of this product beyond the manufacturers design rules or stated parameters is done at the user’s risk. The manufacturer and/or distributor maintain no responsibility or liability for product used beyond the stated limits.

2. APPLICABLE DOCUMENTS

JEDEC Solid State Technology Association

JEDEC PUB 95 – Registered and Standard Outlines for Semiconductor Devices

(Copies of these documents are available online at https://www.jedec.org.)

3. REQUIREMENTS

3.1 Marking. Parts shall be permanently and legibly marked with the manufacturer's part number as shown in 6.3 herein and as follows:

A. Manufacturer's name, CAGE code, or logo
B. Pin 1 identifier
C. ESDS identification (optional)

3.2 Unit container. The unit container shall be marked with the manufacturer's part number and with items A and C (if applicable) above.

3.3 Electrical characteristics. The maximum and recommended operating conditions and electrical performance characteristics are as specified in 1.3, 1.4, and table I herein.

3.4 Design, construction, and physical dimension. The design, construction, and physical dimensions are as specified herein.

3.5 Diagrams.

3.5.1 Case outline. The case outline shall be as shown in 1.2.2 and figure 1.

3.5.2 Terminal connections. The terminal connections shall be as shown in figure 2.

3.5.3 Maximum power dissipation versus temperature for a four layer board. The maximum power dissipation versus temperature for a four layer board graph shall be as shown in figure 3.

TABLE I. Electrical performance characteristics. 1/

| Test | Symbol | Conditions 2/ $V_S = \pm 5$ V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Dynamic performance | | | | | | | |
| -3 dB bandwidth | | G = +1, $V_{OUT}$ = 0.02 $V_{PP}$ | +25°C | 01 | 120 typical | | MHz |
| | | G = +1, $V_{OUT}$ = 2 $V_{PP}$ | | | 40 typical | | |
| Bandwidth for 0.1 dB flatness | | G = +1, $V_{OUT}$ = 0.02 $V_{PP}$ | +25°C | 01 | 18 typical | | MHz |
| Slew rate | SR | G = +1, $V_{OUT}$ = 2 V step | +25°C | 01 | 190 typical | | V/μs |
| | | G = +2, $V_{OUT}$ = 4 V step | | | 250 typical | | |
| Settling time to 0.1% | $t_S$ | G = +1, $V_{OUT}$ = 2 V step | +25°C | 01 | 35 typical | | ns |
| | | G = +2, $V_{OUT}$ = 4 V step | | | 78 typical | | |
| Noise/distortion performance | | | | | | | |
| Second harmonic distortion | HD2 | $f_C$ = 20 kHz, $V_{OUT}$ = 2 $V_{PP}$ | +25°C | 01 | -114 typical | | dBc |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 2 $V_{PP}$ | | | -102 typical | | |
| | | $f_C$ = 20 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +1 | | | -109 typical | | |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +1 | | | -93 typical | | |
| | | $f_C$ = 20 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -113 typical | | |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -96 typical | | |
| Third harmonic distortion 3/ | HD3 | $f_C$ = 20 kHz, $V_{OUT}$ = 2 $V_{PP}$ | +25°C | 01 | -140 typical | | dBc |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 2 $V_{PP}$ | | | -128 typical | | |
| | | $f_C$ = 20 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +1 | | | -143 typical | | |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +1 | | | -130 typical | | |
| | | $f_C$ = 20 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -142 typical | | |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -130 typical | | |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 2/ $V_S$ = ±5 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Noise/distortion performance – continued. | | | | | | | |
| Input voltage noise | | f = 100 kHz | +25°C | 01 | 5.2 typical | | nV/$\sqrt{Hz}$ |
| Input voltage noise | | 1/f corner frequency | +25°C | 01 | 8 typical | | Hz |
| 0.1 Hz to 10 Hz voltage noise | | | +25°C | 01 | 44 typical | | nVrms |
| Input current noise | | f = 100 kHz | +25°C | 01 | 0.7 typical | | pA/$\sqrt{Hz}$ |
| DC performance | | | | | | | |
| Input offset voltage | | | +25°C | 01 | | 125 | µV |
| | | | | | 13 typical | | |
| Input offset voltage 4/ drift | | | -55°C to +125°C | 01 | | 2.7 | µV/°C |
| | | | | | 0.4 typical | | |
| Input bias current | | | +25°C | 01 | | 800 | nA |
| | | | | | 550 typical | | |
| Input offset current | | | +25°C | 01 | | 25 | nA |
| | | | | | 2.1 typical | | |
| Open loop gain | | $V_{OUT}$ = -4.0 V to +4.0 V | +25°C | 01 | 107 | | dB |
| | | | | | 111 typical | | |
| Input characteristics | | | | | | | |
| Input resistance, common mode | | | +25°C | 01 | 50 typical | | MΩ |
| Input resistance, differential mode | | | +25°C | 01 | 260 typical | | kΩ |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 2/ $V_S$ = ±5 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Input characteristics – continued. | | | | | | | |
| Input capacitance | | | +25°C | 01 | 1 typical | | pF |
| Input common mode voltage range | | | +25°C | 01 | -5.1 | +4 | V |
| Common mode rejection ratio | | $V_{IN, CM}$ = -4.0 V to +4.0 V | +25°C | 01 | 103 | | dB |
| | | | | | 130 typical | | |
| Output characteristics | | | | | | | |
| Rising edge output overdrive recovery time | | $V_{IN}$ = +6 V to -6 V, G = +2 | +25°C | 01 | 95 typical | | ns |
| Falling edge output overdrive recovery time | | $V_{IN}$ = +6 V to -6 V, G = +2 | +25°C | 01 | 100 typical | | ns |
| Output voltage swing | | $R_L$ = 2 kΩ | +25°C | 01 | -4.98 | +4.98 | V |
| Short circuit current, sinking | | | +25°C | 01 | 85 typical | | mA |
| Short circuit current, sourcing | | | +25°C | 01 | 73 typical | | mA |
| Linear output current | | < 1% total harmonic distortion (THD) at 100 kHz, $V_{OUT}$ = 2 $V_{PP}$ | +25°C | 01 | ±58 typical | | mA |
| Capacitive load drive | | 30% overshoot | +25°C | 01 | 15 typical | | pF |
| Power supply | | | | | | | |
| Operating range | | | +25°C | 01 | 2.7 | 10 | V |
| Quiescent current per amplifier | | | +25°C | 01 | | 625 | µA |
| | | | | | 570 typical | | |
| Positive power supply rejection ratio | | $+V_S$ = 3 V to 5 V, $-V_S$ = -5 V | +25°C | 01 | 100 | | dB |
| | | | | | 119 typical | | |
| Negative power supply rejection ratio | | $+V_S$ = +5 V, $-V_S$ = -3 V to -5 V | +25°C | 01 | 100 | | dB |
| | | | | | 122 typical | | |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 5/ $V_S$ = 5 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Dynamic performance | | | | | | | |
| -3 dB bandwidth | | G = +1, $V_{OUT}$ = 0.02 $V_{PP}$ | +25°C | 01 | 105 typical | | MHz |
| | | G = +1, $V_{OUT}$ = 2 $V_{PP}$ | | | 35 typical | | |
| Bandwidth for 0.1 dB flatness | | G = +1, $V_{OUT}$ = 0.02 $V_{PP}$ | +25°C | 01 | 20 typical | | MHz |
| Slew rate | SR | G = +1, $V_{OUT}$ = 2 V step | +25°C | 01 | 160 typical | | V/μs |
| | | G = +2, $V_{OUT}$ = 4 V step | | | 220 typical | | |
| Settling time to 0.1% | $t_S$ | G = +1, $V_{OUT}$ = 2 V step | +25°C | 01 | 35 typical | | ns |
| | | G = +2, $V_{OUT}$ = 4 V step | | | 82 typical | | |
| Noise/distortion performance | | | | | | | |
| Second harmonic distortion | HD2 | $f_C$ = 20 kHz, $V_{OUT}$ = 2 $V_{PP}$ | +25°C | 01 | -114 typical | | dBc |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 2 $V_{PP}$ | | | -102 typical | | |
| | | $f_C$ = 20 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -107 typical | | |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -90 typical | | |
| Third harmonic distortion 3/ | HD3 | $f_C$ = 20 kHz, $V_{OUT}$ = 2 $V_{PP}$ | +25°C | 01 | -135 typical | | dBc |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 2 $V_{PP}$ | | | -126 typical | | |
| | | $f_C$ = 20 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -143 typical | | |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 4 $V_{PP}$, G = +2 | | | -130 typical | | |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 5/ $V_S$ = 5 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Noise/distortion performance – continued. | | | | | | | |
| Input voltage noise | | f = 100 kHz | +25°C | 01 | 5.9 typical | | nV/$\sqrt{Hz}$ |
| Input voltage noise | | 1/f corner frequency | +25°C | 01 | 8 typical | | Hz |
| 0.1 Hz to 10 Hz voltage noise | | | +25°C | 01 | 54 typical | | nVrms |
| Input current noise | | f = 100 kHz | +25°C | 01 | 0.6 typical | | pA/$\sqrt{Hz}$ |
| DC performance | | | | | | | |
| Input offset voltage | | | +25°C | 01 | | 125 | µV |
| | | | | | 9 typical | | |
| Input offset voltage 4/ drift | | | -55°C to +125°C | 01 | | 2.7 | µV/°C |
| | | | | | 0.4 typical | | |
| Input bias current | | | +25°C | 01 | | 720 | nA |
| | | | | | 470 typical | | |
| Input offset current | | | +25°C | 01 | 0.4 typical | | nA |
| Open loop gain | | $V_{OUT}$ = 1.25 V to 3.75 V | +25°C | 01 | 105 | | dB |
| | | | | | 109 typical | | |
| Input characteristics | | | | | | | |
| Input resistance, common mode | | | +25°C | 01 | 50 typical | | MΩ |
| Input resistance, differential mode | | | +25°C | 01 | 260 typical | | kΩ |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 5/ $V_S$ = 5 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Input characteristics – continued. | | | | | | | |
| Input capacitance | | | +25°C | 01 | 1 typical | | pF |
| Input common mode voltage range | | | +25°C | 01 | -0.1 | +4 | V |
| Common mode rejection ratio | | $V_{IN, CM}$ = 1.25 V to 3.75 V | +25°C | 01 | 103 | | dB |
| | | | | | 133 typical | | |
| Output characteristics | | | | | | | |
| Rising edge output overdrive recovery time | | $V_{IN}$ = -1 V to +6 V, G = +2 | +25°C | 01 | 130 typical | | ns |
| Falling edge output overdrive recovery time | | $V_{IN}$ = -1 V to +6 V, G = +2 | +25°C | 01 | 145 typical | | ns |
| Output voltage swing | | $R_L$ = 2 kΩ | +25°C | 01 | 0.02 | 4.98 | V |
| Short circuit current, sinking | | | +25°C | 01 | 73 typical | | mA |
| Short circuit current, sourcing | | | +25°C | 01 | 63 typical | | mA |
| Linear output current | | < 1% total harmonic distortion (THD) at 100 kHz, $V_{OUT}$ = 2 $V_{PP}$ | +25°C | 01 | ±47 typical | | mA |
| Capacitive load drive | | 30% overshoot | +25°C | 01 | 15 typical | | pF |
| Power supply | | | | | | | |
| Operating range | | | +25°C | 01 | 2.7 | 10 | V |
| Quiescent current per amplifier | | | +25°C | 01 | | 520 | µA |
| | | | | | 500 typical | | |
| Positive power supply rejection ratio | | $+V_S$ = 1.5 V to 3.5 V, $-V_S$ = -2.5 V | +25°C | 01 | 100 | | dB |
| | | | | | 120 typical | | |
| Negative power supply rejection ratio | | $+V_S$ = +2.5 V, $-V_S$ = -1.5 V to -3.5 V | +25°C | 01 | 100 | | dB |
| | | | | | 126 typical | | |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 5/ $V_S$ = 3 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Dynamic performance | | | | | | | |
| -3 dB bandwidth | | G = +1, $V_{OUT}$ = 0.02 $V_{PP}$ | +25°C | 01 | 95 typical | | MHz |
| | | G = +1, $V_{OUT}$ = 1 $V_{PP}$, $+V_S$ = 2 V, $-V_S$ = -1 V | | | 30 typical | | |
| Bandwidth for 0.1 dB flatness | | G = +1, $V_{OUT}$ = 0.02 $V_{PP}$ | +25°C | 01 | 35 typical | | MHz |
| Slew rate | SR | G = +1, $V_{OUT}$ = 1 V step, $+V_S$ = 2 V, $-V_S$ = -1 V | +25°C | 01 | 85 typical | | V/µs |
| Settling time to 0.1% | $t_S$ | G = +1, $V_{OUT}$ = 1 V step | +25°C | 01 | 41 typical | | ns |
| Noise/distortion performance | | | | | | | |
| Second harmonic distortion | HD2 | $f_C$ = 20 kHz, $V_{OUT}$ = 1 $V_{PP}$, $+V_S$ = 2 V, $-V_S$ = -1 V | +25°C | 01 | -123 typical | | dBc |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 1 $V_{PP}$, $+V_S$ = 2 V, $-V_S$ = -1 V | | | -107 typical | | |
| Third harmonic 3/ distortion | HD3 | $f_C$ = 20 kHz, $V_{OUT}$ = 1 $V_{PP}$, $+V_S$ = 2 V, $-V_S$ = -1 V | +25°C | 01 | -143 typical | | dBc |
| | | $f_C$ = 100 kHz, $V_{OUT}$ = 1 $V_{PP}$, $+V_S$ = 2 V, $-V_S$ = -1 V | | | -133 typical | | |
| Input voltage noise | | f = 100 kHz | +25°C | 01 | 6.3 typical | | nV/$\sqrt{Hz}$ |
| Input voltage noise | | 1/f corner frequency | +25°C | 01 | 8 typical | | Hz |
| 0.1 Hz to 10 Hz voltage noise | | | +25°C | 01 | 55 typical | | nVrms |
| Input current noise | | f = 100 kHz | +25°C | 01 | 0.8 typical | | pA/$\sqrt{Hz}$ |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 5/ $V_S$ = 3 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| DC performance | | | | | | | |
| Input offset voltage | | | +25°C | 01 | | 125 | µV |
| | | | | | 7 typical | | |
| Input offset voltage 4/ drift | | | -55°C to +125°C | 01 | | 2.7 | µV/°C |
| | | | | | 0.4 typical | | |
| Input bias current | | | +25°C | 01 | | 690 | nA |
| | | | | | 440 typical | | |
| Input offset current | | | +25°C | 01 | 0.5 typical | | nA |
| Open loop gain | | $V_{OUT}$ = 1.1 V to 1.9 V | +25°C | 01 | 100 | | dB |
| | | | | | 107 typical | | |
| Input characteristics | | | | | | | |
| Input resistance, common mode | | | +25°C | 01 | 50 typical | | MΩ |
| Input resistance, differential mode | | | +25°C | 01 | 260 typical | | kΩ |
| Input capacitance | | | +25°C | 01 | 1 typical | | pF |
| Input common mode voltage range | | | +25°C | 01 | -0.1 | +2 | V |
| Common mode rejection ratio | | $V_{IN, CM}$ = 0.5 V to 2 V | +25°C | 01 | 89 | | dB |
| | | | | | 117 typical | | |

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued. 1/

| Test | Symbol | Conditions 5/ $V_S$ = 3 V, unless otherwise specified | Temperature, $T_A$ | Device type | Limits | | Unit |
|---|---|---|---|---|---|---|---|
| | | | | | Min | Max | |
| Output characteristics | | | | | | | |
| Rising edge output overdrive recovery time | | $V_{IN}$ = -1 V to +4 V, G = +2 | +25°C | 01 | 135 typical | | ns |
| Falling edge output overdrive recovery time | | $V_{IN}$ = -1 V to +4 V, G = +2 | +25°C | 01 | 175 typical | | ns |
| Output voltage swing | | $R_L$ = 2 kΩ | +25°C | 01 | 0.02 | 2.98 | V |
| Short circuit current, sinking | | | +25°C | 01 | 65 typical | | mA |
| Short circuit current, sourcing | | | +25°C | 01 | 47 typical | | mA |
| Linear output current | | < 1% total harmonic distortion (THD) at 100 kHz, $V_{OUT}$ = 1 $V_{PP}$ | +25°C | 01 | ±40 typical | | mA |
| Capacitive load drive | | 30% overshoot | +25°C | 01 | 15 typical | | pF |
| Power supply | | | | | | | |
| Operating range | | | +25°C | 01 | 2.7 | 10 | V |
| Quiescent current per amplifier | | | +25°C | 01 | | 495 | μA |
| | | | | | 470 typical | | |
| Positive power supply rejection ratio | | +$V_S$ = 1.5 V to 3.5 V, -$V_S$ = -1.5 V | +25°C | 01 | 96 | | dB |
| | | | | | 119 typical | | |
| Negative power supply rejection ratio | | +$V_S$ = +1.5 V, -$V_S$ = -1.5 V to -3.5 V | +25°C | 01 | 96 | | dB |
| | | | | | 125 typical | | |

1/ Testing and other quality control techniques are used to the extent deemed necessary to assure product performance over the specified temperature range. Product may not necessarily be tested across the full temperature range and all parameters may not necessarily be tested. In the absence of specific parametric testing, product performance is assured by characterization and/or design.

2/ Unless otherwise specified, $R_F$ = 0 Ω for G = +1; otherwise $R_F$ = 1 kΩ, $R_L$ = 2 kΩ to ground. All specification are per amplifier.

3/ $f_C$ is the fundamental frequency.

4/ Guaranteed, but not tested.

5/ Unless otherwise specified, $R_F$ = 0 Ω for G = +1; otherwise $R_F$ = 1 kΩ, $R_L$ = 2 kΩ to midsupply. All specification are per amplifier.

Case X

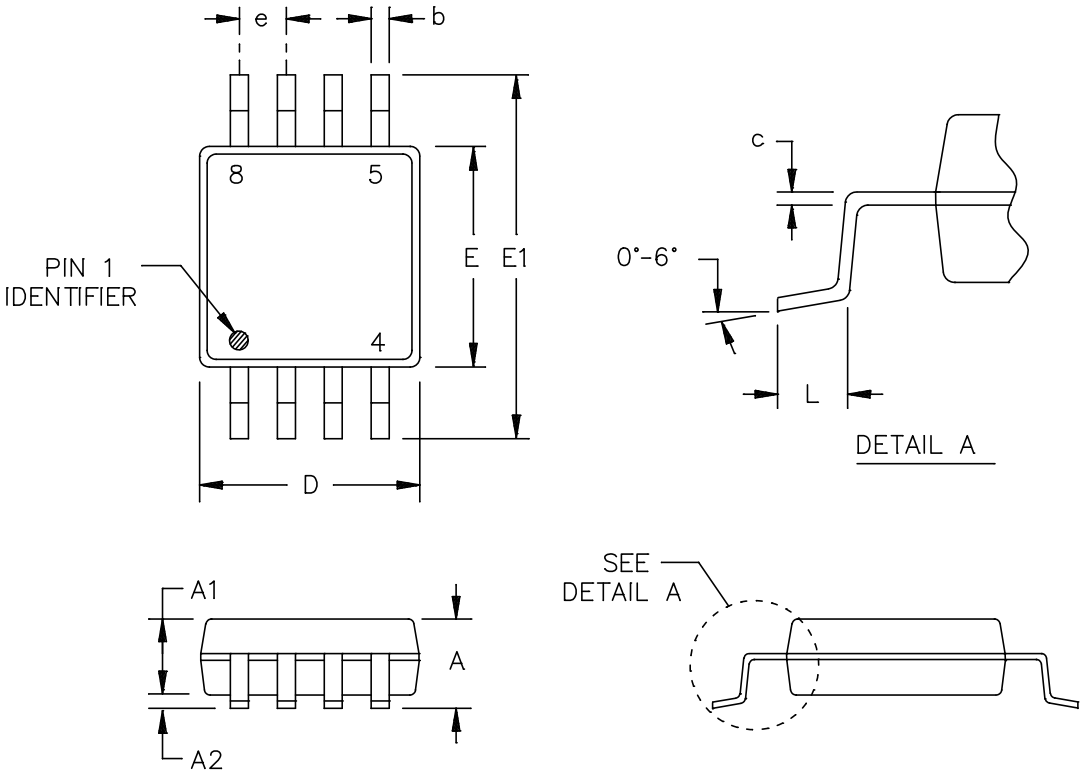


FIGURE 1. Case outline.

Case X – continued.

| Symbol | Dimensions | | | | | |
|---|---|---|---|---|---|---|
| | Inches | | | Millimeters | | |
| | Minimum | Nominal | Maximum | Minimum | Nominal | Maximum |
| A | --- | --- | .043 | --- | --- | 1.10 |
| A1 | .029 | .033 | .037 | 0.75 | 0.85 | 0.95 |
| A2 | .001 | .003 coplanarity | .005 | 0.05 | 0.10 coplanarity | 0.15 |
| b | .010 | --- | .015 | 0.25 | --- | 0.40 |
| c | .003 | --- | .009 | 0.09 | --- | 0.23 |
| D | .110 | .118 | .125 | 2.80 | 3.00 | 3.20 |
| E | .110 | .118 | .125 | 2.80 | 3.00 | 3.20 |
| E1 | .183 | .192 | .202 | 4.65 | 4.90 | 5.15 |
| e | 0.026 BSC | | | 0.65 BSC | | |
| L | .015 | .021 | .031 | 0.40 | 0.55 | 0.80 |

NOTES:
1. Controlling dimensions are millimeter, inch dimensions are given for reference only.
2. Falls with JEDEC MO-187-AA.

FIGURE 1. Case outline - Continued.

| Device type | 01 | |
|---|---|---|
| Case outline | X | |
| Terminal number | Terminal symbol | Description |
| 1 | $V_{OUT1}$ | Output 1. |
| 2 | -IN1 | Inverting input 1. |
| 3 | +IN1 | Noninverting input 1. |
| 4 | $-V_S$ | Negative supply. |
| 5 | +IN2 | Noninverting input 2. |
| 6 | -IN2 | Inverting input 2. |
| 7 | $V_{OUT2}$ | Output 2. |
| 8 | $+V_S$ | Positive supply. |

FIGURE 2. Terminal connections.

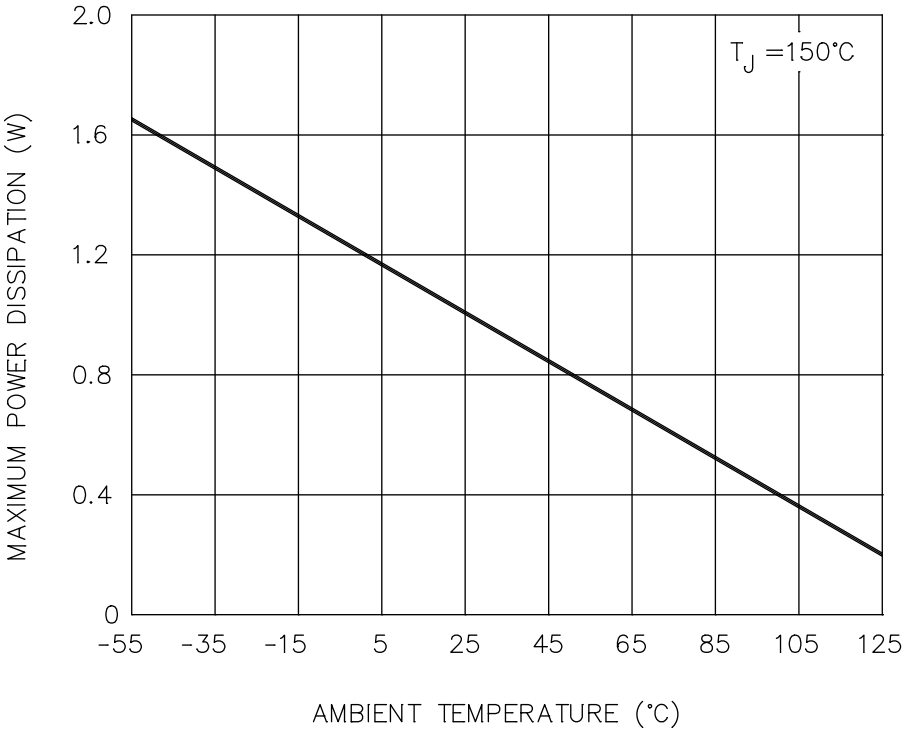


FIGURE 3. Maximum power dissipation versus temperature for a four layer board.

4. VERIFICATION

4.1 Product assurance requirements. The manufacturer is responsible for performing all inspection and test requirements as indicated in their internal documentation. Such procedures should include proper handling of electrostatic sensitive devices, classification, packaging, and labeling of moisture sensitive devices, as applicable.

5. PREPARATION FOR DELIVERY

5.1 Packaging. Preservation, packaging, labeling, and marking shall be in accordance with the manufacturer's standard commercial practices for electrostatic discharge sensitive devices.

6. NOTES

6.1 ESDS. Devices are electrostatic discharge sensitive and are classified as ESDS class 1 minimum.

6.2 Configuration control. The data contained herein is based on the salient characteristics of the device manufacturer's data book. The device manufacturer reserves the right to make changes without notice. This drawing will be modified as changes are provided.

6.3 Suggested source(s) of supply. Identification of the suggested source(s) of supply herein is not to be construed as a guarantee of present or continued availability as a source of supply for the item. DLA Land and Maritime maintains an online database of all current sources of supply at https://landandmaritimeapps.dla.mil/programs/smcr/.

| Vendor item drawing administrative control number 1/ | Device manufacturer CAGE code | Mode of transportation and quantity | Vendor part number |
|---|---|---|---|
| V62/16621-01XE | 24355 | Tube, 50 units | ADA4805-2TRMZ-EP |
| V62/16621-01XE | 24355 | Reel, 1000 units | ADA4805-2TRMZ-EPR7 |

1/ The vendor item drawing establishes an administrative control number for identifying the item on the engineering documentation.

| CAGE code | Source of supply |
|---|---|
| 24355 | Analog Devices<br>Route 1 Industrial Park<br>P.O. Box 9106<br>Norwood, MA 02062<br>Point of contact: 20 Alpha Road<br>Chelmsford, MA 01824-4123 |