



## DIO207x

### Single/Dual/Quad/Six channel, RRIO 10MHz Amplifier

#### Features

- Rail-to-Rail Input and Output
- $\pm 3\text{mV}$  Typical offset ( $V_{OS}$ )
- Low Distortion
- Gain Bandwidth Product: 10MHz
- Wide supply range: 3.0V to 5.5V
- 3mA/Amplifier typical supply current
- Slew rate: 4.0V/ $\mu\text{s}$
- DIO2071 available in SOT23-5  
DIO2072 available in SOIC-8, MSOP-8 and TSSOP-8  
DIO2074 available in SOIC-14, QFN-16  
DIO2076 available in SOIC-20, QFN-28

#### Applications

- Portable Equipment
- Active Filters
- Data Acquisition
- Portable Equipment
- Test Equipment
- Broadband Communication
- Process Control
- Audio and Video Processing

#### Ordering Information

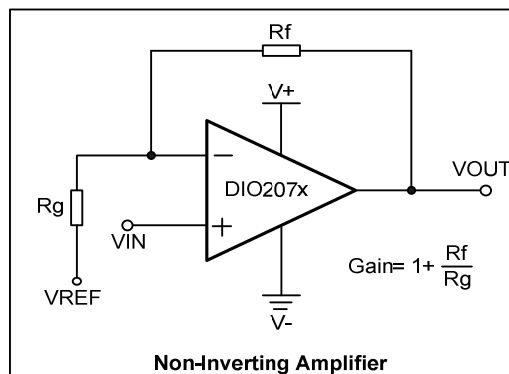
| Order Part Number | Top Marking |            | $T_A$         |         | Package           |
|-------------------|-------------|------------|---------------|---------|-------------------|
| DIO2071ST5        | YW(X)Z      | Green/RoHS | -40 to +125°C | SOT23-5 | Tape & Reel, 3000 |
| DIO2072MP8        | DIO2072     | Green/RoHS | -40 to +125°C | MSOP-8  | Tape & Reel, 3000 |
| DIO2072SO8        | DIO2072     | Green/RoHS | -40 to +125°C | SOIC-8  | Tape & Reel, 2500 |
| DIO2072TP8        | DIO2072     | Green/RoHS | -40 to +125°C | TSSOP-8 | Tape & Reel, 2500 |
| DIO2074CS14       | DIO2074     | Green/RoHS | -40 to +125°C | SOIC-14 | Tape & Reel, 2500 |
| DIO2074CN16       | D2074       | Green/RoHS | -40 to +125°C | QFN-16  | Tape & Reel, 5000 |
| DIO2076CS20       | DIO2076     | Green/RoHS | -40 to +125°C | SOIC-20 | Tape & Reel, 2500 |
| DIO2076CL28       | D2076       | Green/RoHS | -40 to +125°C | QFN-28  | Tape & Reel, 5000 |

#### Descriptions

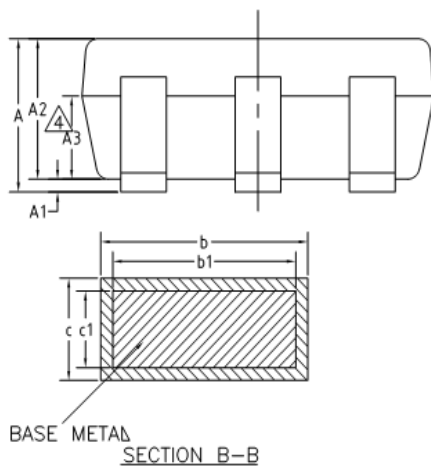
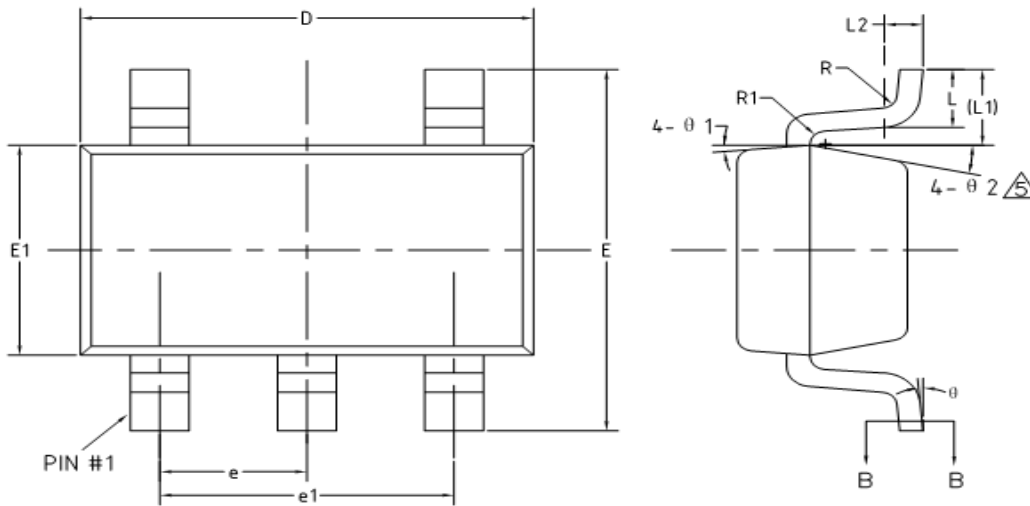
The DIO207x is a single/dual/quad/six channel, rail-to-rail I/O operational amplifier which allows low load impedances to be driven. With a 10MHz unity-gain frequency and low noise, low distortion and high output current capability, the DIO207x provides excellent choice for high quality systems. The input common-mode voltage range includes ground, and the maximum input offset voltage is  $\pm 3\text{mV}$  (guaranteed). They are also capable of comfortably driving large capacitive loads.

DIO207x is offered in Green or RoHS package and ESD (HBM) exceeds 4kV. It is specified over the extended -40 to +125°C.

#### Typical Application

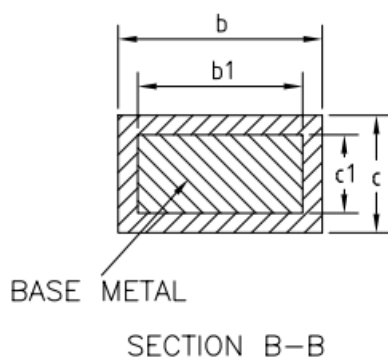
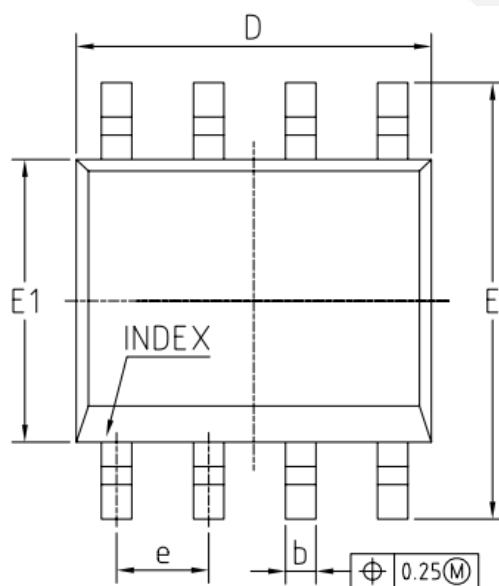
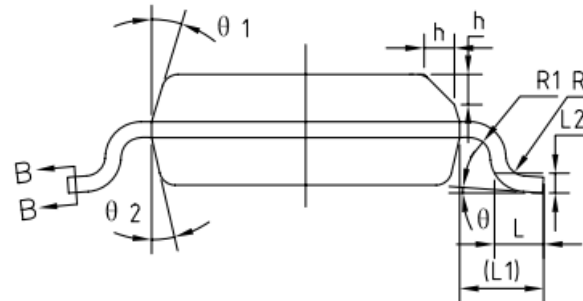
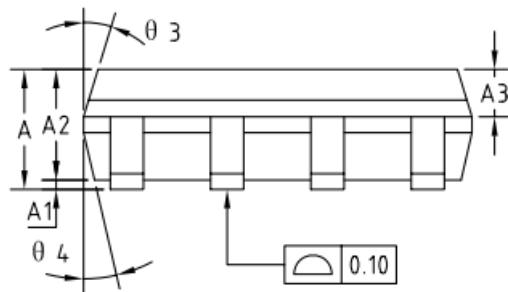


## Physical Dimensions: SOT-23-5



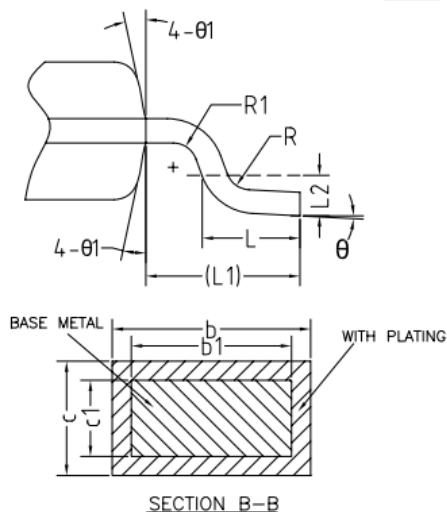
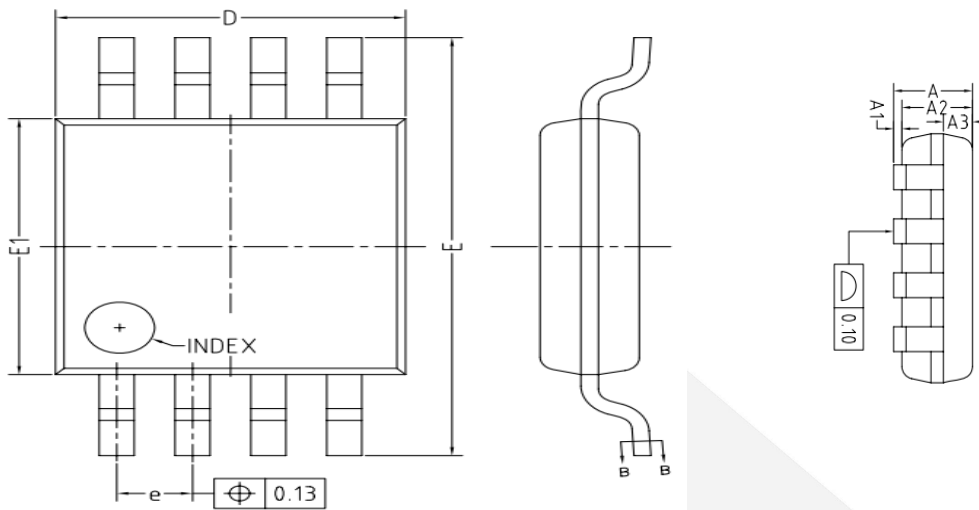
| COMMON DIMENSIONS<br>(UNITS OF MEASURE=MILLIMETER) |         |       |       |
|----------------------------------------------------|---------|-------|-------|
| Symbol                                             | MIN     | NOM   | MAX   |
| A                                                  | -       | -     | 1.25  |
| A1                                                 | 0       | -     | 0.15  |
| A2                                                 | 1.00    | 1.10  | 1.20  |
| A3                                                 | 0.60    | 0.65  | 0.70  |
| b                                                  | 0.36    | -     | 0.50  |
| b1                                                 | 0.36    | 0.38  | 0.45  |
| c                                                  | 0.14    | -     | 0.20  |
| c1                                                 | 0.14    | 0.15  | 0.16  |
| D                                                  | 2.826   | 2.926 | 3.026 |
| E                                                  | 2.60    | 2.80  | 3.00  |
| E1                                                 | 1.526   | 1.626 | 1.726 |
| e                                                  | 0.90    | 0.95  | 1.00  |
| e1                                                 | 1.80    | 1.90  | 2.00  |
| L                                                  | 0.35    | 0.45  | 0.60  |
| L1                                                 | 0.59REF |       |       |
| L2                                                 | 0.25BSC |       |       |
| R                                                  | 0.10    | -     | -     |
| R1                                                 | 0.10    | -     | 0.25  |
| θ                                                  | 0°      | -     | 8°    |
| θ1                                                 | 3°      | 5°    | 7°    |
| θ2                                                 | 6°      | -     | 14°   |

## Physical Dimensions: SOIC-8



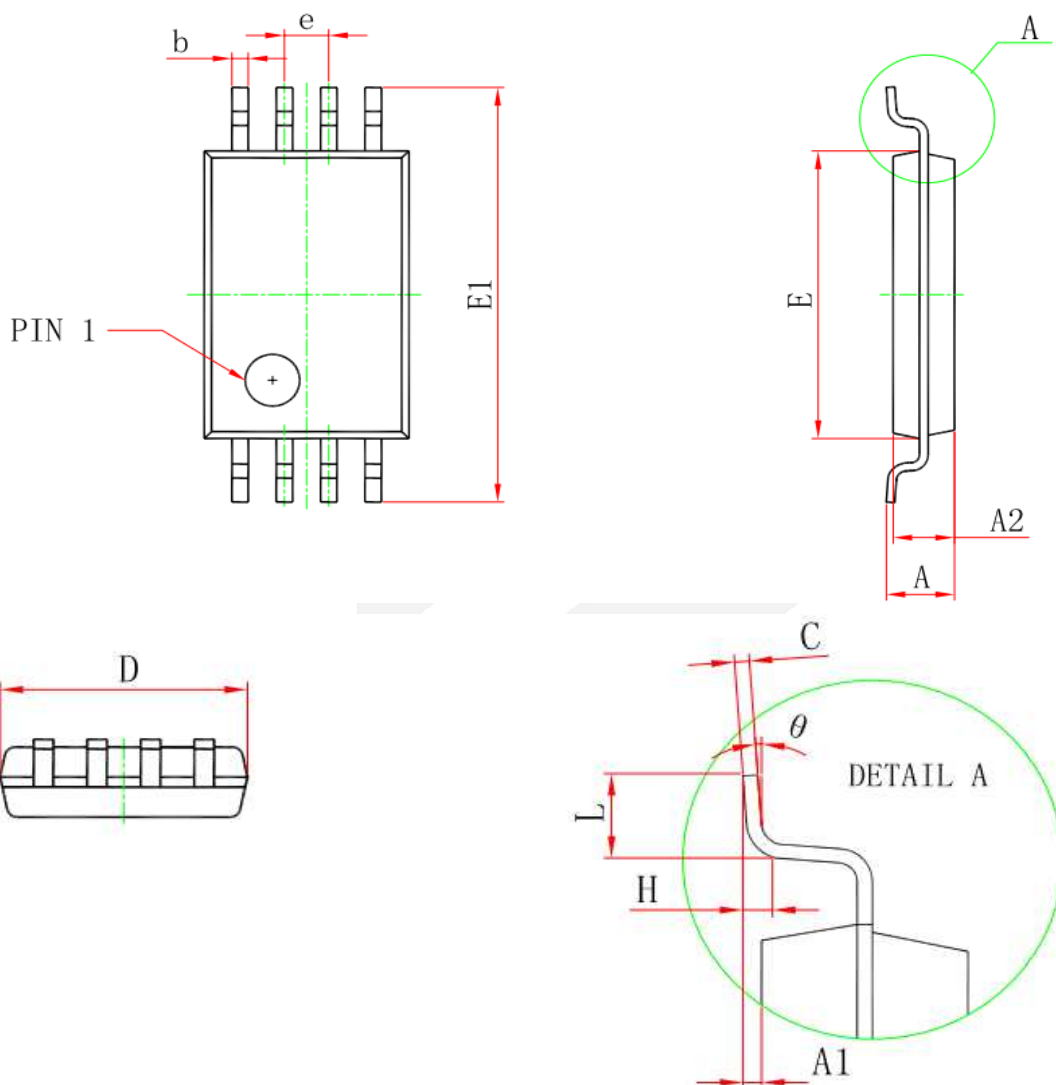
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|----------------------------------------------------|---------|------|------|
| Symbol                                             | MIN     | NOM  | MAX  |
| A                                                  | 1.35    | 1.55 | 1.75 |
| A1                                                 | 0.10    | 0.15 | 0.25 |
| A2                                                 | 1.25    | 1.40 | 1.65 |
| A3                                                 | 0.50    | 0.60 | 0.70 |
| b                                                  | 0.38    | -    | 0.51 |
| b1                                                 | 0.37    | 0.42 | 0.47 |
| c                                                  | 0.17    | -    | 0.25 |
| c1                                                 | 0.17    | 0.20 | 0.23 |
| D                                                  | 4.80    | 4.90 | 5.00 |
| E                                                  | 5.80    | 6.00 | 6.20 |
| E1                                                 | 3.80    | 3.90 | 4.00 |
| e                                                  | 1.27BSC |      |      |
| L                                                  | 0.45    | 0.60 | 0.80 |
| L1                                                 | 1.04REF |      |      |
| L2                                                 | 0.25BSC |      |      |
| R                                                  | 0.07    | -    | -    |
| R1                                                 | 0.07    | -    | -    |
| h                                                  | 0.30    | 0.40 | 0.50 |
| θ                                                  | 0°      | -    | 8°   |
| θ1                                                 | 15°     | 17°  | 19°  |
| θ2                                                 | 11°     | 13°  | 15°  |
| θ3                                                 | 15°     | 17°  | 19°  |
| θ4                                                 | 11°     | 13°  | 15°  |

## Physical Dimensions: MSOP-8



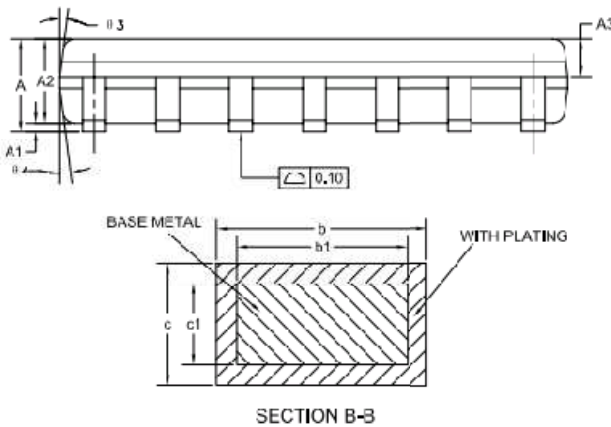
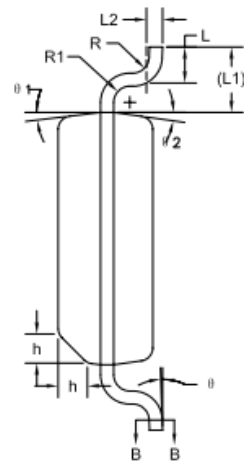
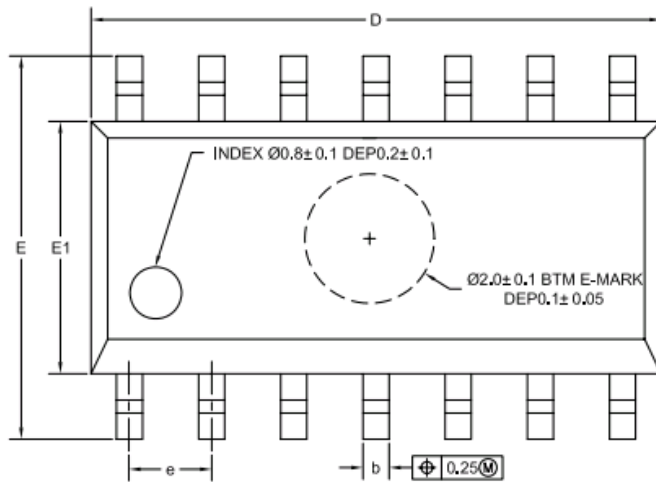
| COMMON DIMENSIONS<br>(UNITS OF MEASURE=MILLIMETER) |         |      |      |
|----------------------------------------------------|---------|------|------|
| Symbol                                             | MIN     | NOM  | MAX  |
| A                                                  | -       | -    | 1.10 |
| A1                                                 | 0       | -    | 0.15 |
| A2                                                 | 0.75    | 0.85 | 0.95 |
| A3                                                 | 0.25    | 0.35 | 0.39 |
| b                                                  | 0.28    | -    | 0.37 |
| b1                                                 | 0.27    | 0.30 | 0.33 |
| c                                                  | 0.15    | -    | 0.20 |
| c1                                                 | 0.14    | 0.15 | 0.16 |
| D                                                  | 2.90    | 3.00 | 3.10 |
| E                                                  | 4.70    | 4.90 | 5.10 |
| E1                                                 | 2.90    | 3.00 | 3.10 |
| e                                                  | 0.55    | 0.65 | 0.75 |
| L                                                  | 0.45    | 0.60 | 0.80 |
| L1                                                 | 0.95REF |      |      |
| L2                                                 | 0.25BSC |      |      |
| R                                                  | 0.07    | -    | -    |
| R1                                                 | 0.07    | -    | -    |
| θ                                                  | 0°      | -    | 8°   |
| θ1                                                 | 9°      | 12°  | 15°  |

## Physical Dimensions: TSSOP-8



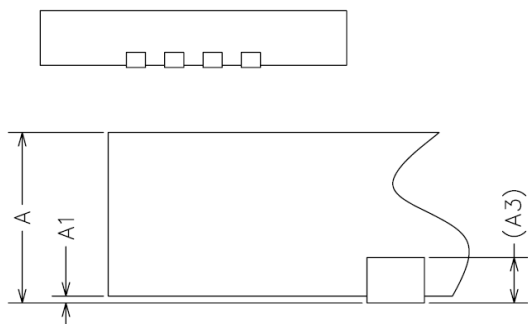
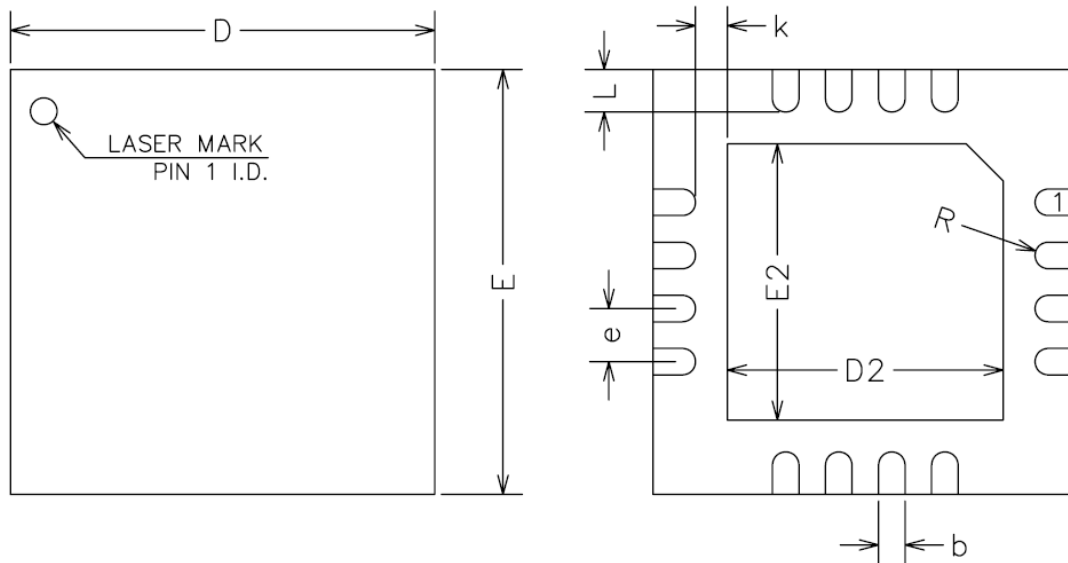
| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| D        | 2.900                     | 3.100 | 0.114                | 0.122 |
| E        | 4.300                     | 4.500 | 0.169                | 0.177 |
| b        | 0.190                     | 0.300 | 0.007                | 0.012 |
| c        | 0.090                     | 0.200 | 0.004                | 0.008 |
| E1       | 6.250                     | 6.550 | 0.246                | 0.258 |
| A        |                           | 1.200 |                      | 0.047 |
| A2       | 0.800                     | 1.000 | 0.031                | 0.039 |
| A1       | 0.050                     | 0.150 | 0.002                | 0.006 |
| e        | 0.65 (BSC)                |       | 0.026 (BSC)          |       |
| L        | 0.500                     | 0.700 | 0.020                | 0.028 |
| H        | 0.25 (TYP)                |       | 0.01 (TYP)           |       |
| $\theta$ | 1°                        | 7°    | 1°                   | 7°    |

## Physical Dimensions: SOIC-14



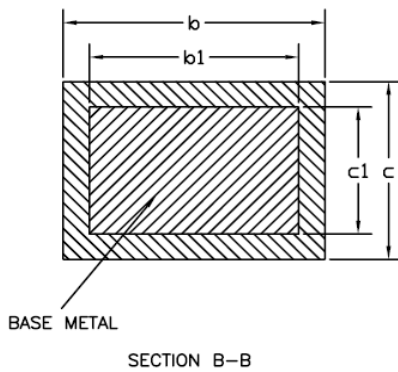
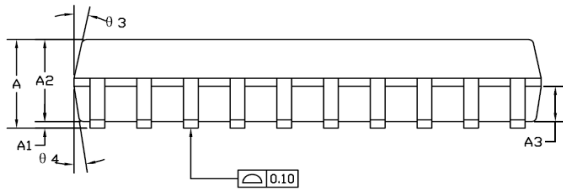
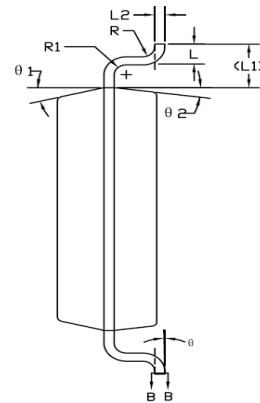
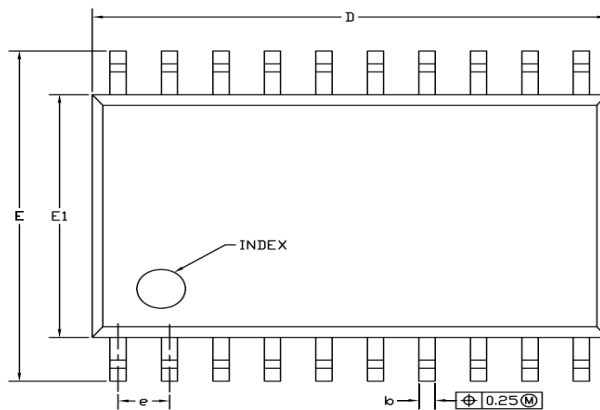
| COMMON DIMENSIONS<br>(UNITS OF MEASURE=MILLIMETER) |            |      |      |
|----------------------------------------------------|------------|------|------|
| Symbol                                             | MIN        | NOM  | MAX  |
| A                                                  | 1.35       | 1.60 | 1.75 |
| A1                                                 | 0.10       | 0.15 | 0.25 |
| A2                                                 | 1.25       | 1.45 | 1.65 |
| A3                                                 | 0.55       | 0.65 | 0.75 |
| b                                                  | 0.36       | -    | 0.49 |
| b1                                                 | 0.35       | 0.40 | 0.45 |
| c                                                  | 0.17       | -    | 0.25 |
| c1                                                 | 0.17       | 0.20 | 0.23 |
| D                                                  | 8.53       | 8.63 | 8.73 |
| E                                                  | 5.80       | 6.00 | 6.20 |
| E1                                                 | 3.80       | 3.90 | 4.00 |
| e                                                  | 1.27 (BSC) |      |      |
| L                                                  | 0.45       | 0.60 | 0.80 |
| L1                                                 | 1.04 (RFE) |      |      |
| L2                                                 | 0.25 (BSC) |      |      |
| R                                                  | 0.07       | -    | -    |
| R1                                                 | 0.07       | -    | -    |
| h                                                  | 0.30       | 0.40 | 0.50 |
| Θ                                                  | 0°         | -    | 8°   |
| Θ1                                                 | 6°         | 8°   | 10°  |
| Θ2                                                 | 6°         | 8°   | 10°  |
| Θ3                                                 | 5°         | 7°   | 9°   |
| Θ4                                                 | 5°         | 7°   | 9°   |

## Physical Dimensions: QFN-16



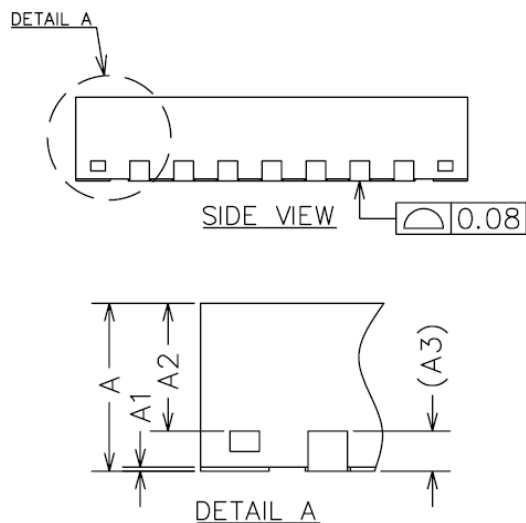
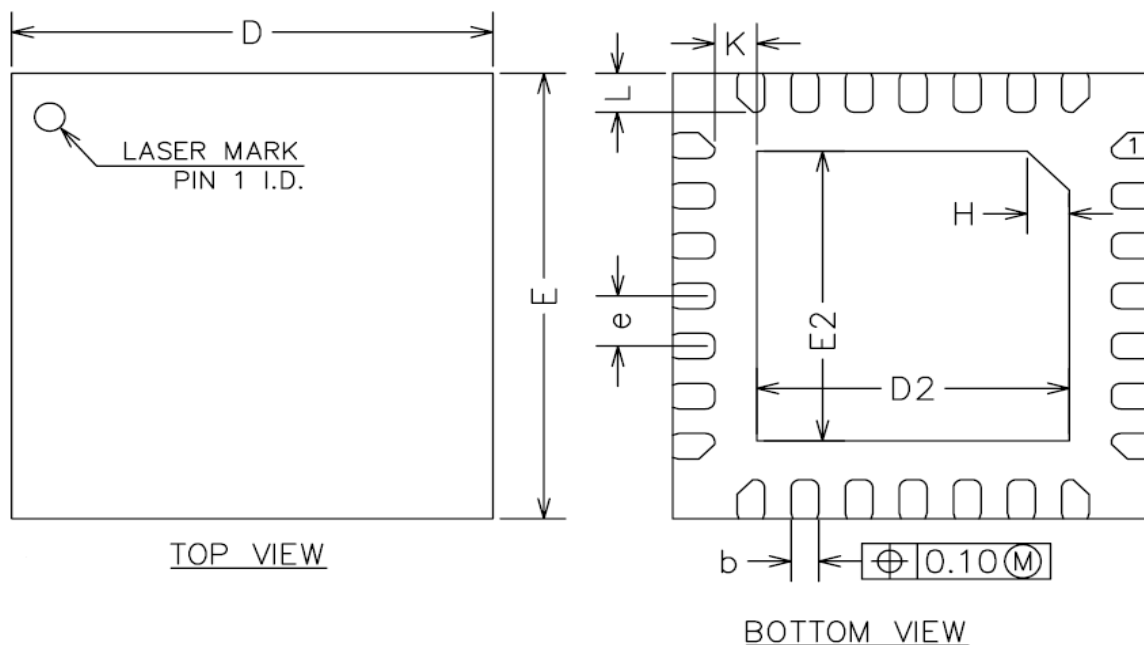
| COMMON DIMENSIONS<br>(UNITS OF MEASURE=MILLIMETER) |         |      |      |
|----------------------------------------------------|---------|------|------|
| Symbol                                             | MIN     | NOM  | MAX  |
| A                                                  | 0.70    | 0.75 | 0.80 |
| A1                                                 | 0       | 0.02 | 0.05 |
| A3                                                 | 0.20REF |      |      |
| b                                                  | 0.20    | 0.25 | 0.30 |
| D                                                  | 3.90    | 4.00 | 4.10 |
| E                                                  | 3.90    | 4.00 | 4.10 |
| D2                                                 | 2.50    | 2.60 | 2.70 |
| E2                                                 | 2.50    | 2.60 | 2.70 |
| e                                                  | 0.40    | 0.50 | 0.60 |
| K                                                  | 0.20    | -    | -    |
| L                                                  | 0.35    | 0.40 | 0.45 |
| R                                                  | 0.09    | -    | -    |

## Physical Dimensions: SOIC-20



| COMMON DIMENSIONS<br>(UNITS OF MEASURE=MILLIMETER) |         |       |       |
|----------------------------------------------------|---------|-------|-------|
| Symbol                                             | MIN     | NOM   | MAX   |
| A                                                  | 2.35    | 2.52  | 2.65  |
| A1                                                 | 0.10    | 0.20  | 0.30  |
| A2                                                 | 2.05    | 2.35  | 2.55  |
| A3                                                 | 0.90    | 1.00  | 1.10  |
| b                                                  | 0.35    | -     | 0.49  |
| b1                                                 | 0.35    | 0.40  | 0.45  |
| c                                                  | 0.23    | -     | 0.32  |
| c1                                                 | 0.20    | 0.25  | 0.30  |
| D                                                  | 12.60   | 12.70 | 12.80 |
| E                                                  | 10.00   | 10.20 | 10.60 |
| E1                                                 | 7.40    | 7.50  | 7.60  |
| e                                                  | 1.27BSC |       |       |
| L                                                  | 0.50    | 0.80  | 1.27  |
| L1                                                 | 1.35REF |       |       |
| L2                                                 | 0.25BSC |       |       |
| R                                                  | 0.07    | -     | -     |
| R1                                                 | 0.07    | -     | -     |
| $\theta$                                           | 0°      | -     | 8°    |
| $\theta_1$                                         | 10°     | 12°   | 14°   |
| $\theta_2$                                         | 6°      | 8°    | 10°   |
| $\theta_3$                                         | 9°      | 11.5° | 14°   |
| $\theta_4$                                         | 6°      | 8°    | 10°   |

## Physical Dimensions: QFN-28



| COMMON DIMENSIONS<br>(UNITS OF MEASURE=MILLIMETER) |         |      |      |
|----------------------------------------------------|---------|------|------|
| Symbol                                             | MIN     | NOM  | MAX  |
| A                                                  | 0.80    | 0.85 | 0.90 |
| A1                                                 | 0.00    | 0.02 | 0.05 |
| A2                                                 | 0.60    | 0.65 | 0.70 |
| A3                                                 | 0.20REF |      |      |
| b                                                  | 0.18    | 0.23 | 0.28 |
| D                                                  | 3.90    | 4.00 | 4.10 |
| E                                                  | 3.90    | 4.00 | 4.10 |
| D2                                                 | 2.50    | 2.60 | 2.70 |
| E2                                                 | 2.50    | 2.60 | 2.70 |
| e                                                  | 0.35    | 0.45 | 0.55 |
| H                                                  | 0.35REF |      |      |
| K                                                  | 0.25    | -    | -    |
| L                                                  | 0.30    | 0.35 | 0.40 |



## DIO207x

Single/Dual/Quad/Six channel RRIO 10MHz Amplifier

### CONTACT US

**Dioo** is a professional design and sales corporation for high-quality and performance analog semiconductors. The company focuses on industry markets, such as, cell phone, handheld products, laptop, and medical equipments and so on. Dioo's product families include analog signal processing and amplifying, LED drivers and charger IC. Go to <http://www.dioo.com> for a complete list of Dioo product families.

For additional product information, or full datasheet, please contact with our Sales Department or Representatives.



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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[www.lifeelectronics.ru](http://www.lifeelectronics.ru)