# Dual Operational Amplifiers

## .0FEATURES

- Wide range of supply voltages(3Vto32V)
- Low supply current drain independent of supply voltage
- Low input biasing current
- Low input offset voltage and offset current
- Input common-mode voltage range includes ground
- Differential input voltage range includes ground
- DC voltage gain 100 V/mV Typ
- Intemally frequency compensation

## Descriptions

The 358 consists of two independent,high gain,in temally frequency compensated operational amplifiers which were designed sepecifically to operate from a sinfle power supply over a wide range of voltages the magnitude of the power supply voltage

## Ordering Information

| Part Number | Description |
|---|---|
| DP358 | DIP-8, Pb free in T&R, 50 Pcs/Tube |
| | SOP-8, Pb free in T&R, 4000 Pcs/Reel |

## ➢ Marking Information


DP358for product name:

DP:DeveloPer microelectronics

XXXXXX The first X represents the last year,2014 is 4;The second X represents the month,inA-L 12 letters;The third and fourth X on behalf of the date,01-31said;The last two X represents the wafer batch code

## ➢ ABSOLUTE MAXIMUM RATINGS

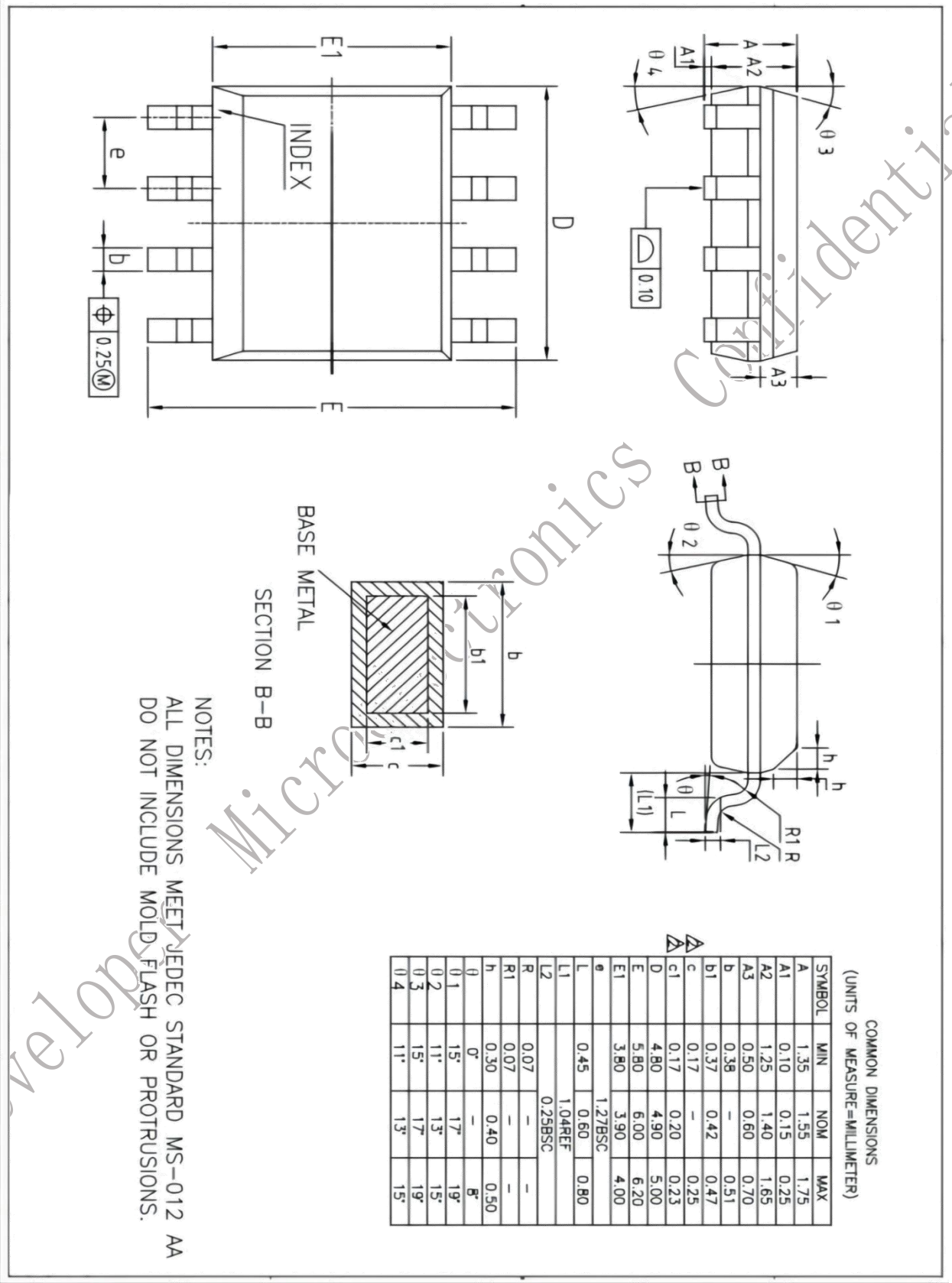
| 参数 | 参数范围 | 单位 |
|---|---|---|
| Operating Temperature Range | -10°C to +85°C | °C |
| Storage Temperature Range: | -65°C to 150°C | °C |

## Electrical Characteristics

| PARAMETER | TEST CONDITIONS* | | 358 | | | UNIT |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| VIO | Vcc = 5 V to MAX, Vic = Vicr min, Vo=1.4 V | 25 °C | | 3 | 7 | mV |
| Input offset voltage | | Full range | | | 9 | |
| aVio | | Full range | | 7 | | uV℃ |
| Average temperature coefficient of input offset voltage | | | | | | |
| ho | Vo=1.4 V | 25 °C Full range | | 2 | 50 | mA |
| Input offset current | | | | | 150 | |
| allO | | Full range | | 10 | | pA/°C |
| Average temperature coefficient of input offset current | | | | | | |
| Hb | Vo=1.4 V | 25 °C Full range | | -20 | -250 | nA |
| Input bias current | | | | | -500 | |
| V\|CR | Vco = 5 V to MAX | 25° C | 0 to Vcc-1.5 | | | V |
| Common-mode input voltage range | | Full range | 0 to Vcc - 2 | | | |
| VOH High-level output voltage | RI=2 kQ | 25 °C | Vcc-1.5 | | | V |
| | Vcc 二 MAX, R\|=2 kQ | Full range | 26 | | | |
| | Voc = MAX, RI= 10 kQ | Full range | 27 | 28 | | |
| Vol | R\|_ = 10 kQ | Full range | | 5 | 20 | mV |
| Low-level output voltage | | | | | | |
| Avd | Vcc = 15 V, Vo=1V to 11 V, | 25 °C | 25 | 10 0 | | V/mV |
| Large-signal differential voltage amplification | RL >2 kfi | Full range | 15 | | | |
| CMRR | Vcc = 5 V to MAX, Vic = V\|CR min | 25 °C | 65 | 80 | | dB |
| Common-mode rejection ratio | | | | | | |
| ksvR Supply voltage rejection ratio (Avcc/AViq) | Vcc = 5 V to MAX | 25 °C | 65 | 10 0 | | dB |
| Vol /Vo2 | kHz to 20 kHz | 25 °C | | 120 | | dB |
| Crosstalk attenuation | | | | | | |
| Io | Vcc = 15 V, Md=1 V,Vo=0 | 25 °C | -20 | -30 | | mA |
| | | Full range | -10 | | | |
| Output current | Vcc = 15 V, | 25 °C Full range | 10 | 20 | | |
| | V\|D=- 1 v, Vo = 15 V | | 5 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | V\|D = - 1 V, Vo =20 OmV | 25 °C | 12 | 30 | | uA |
| bs | Vcc at 5 V, | 25 °C | | ±40 | ±60 | mA |
| Short-circuit output current | GNDat -5V,Vo=0 | | | | | |
| Icc | Vo - 2.5 V, No load | Full range | | 0.7 | 1.2 | |
| Supply current (two amplifiers) | Vcc= MAX, | Full range | | 1 | 2 | mA |
| | Vo = 0.5Vcc, No load | | | | | |

## Package Dimension




COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

| 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° |

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