

Description

The A4558 is a monolithic Integrated Circuit designed for dual operational amplifier.

Features

- Power consumption as small as about 50mW (typ.)
- Built-in output short-circuit protecting circuit.
- Internal phase consumption type.
- No latch-up
- Wide same phase mode and differential voltage ranges
- High gain. low noise

Applications

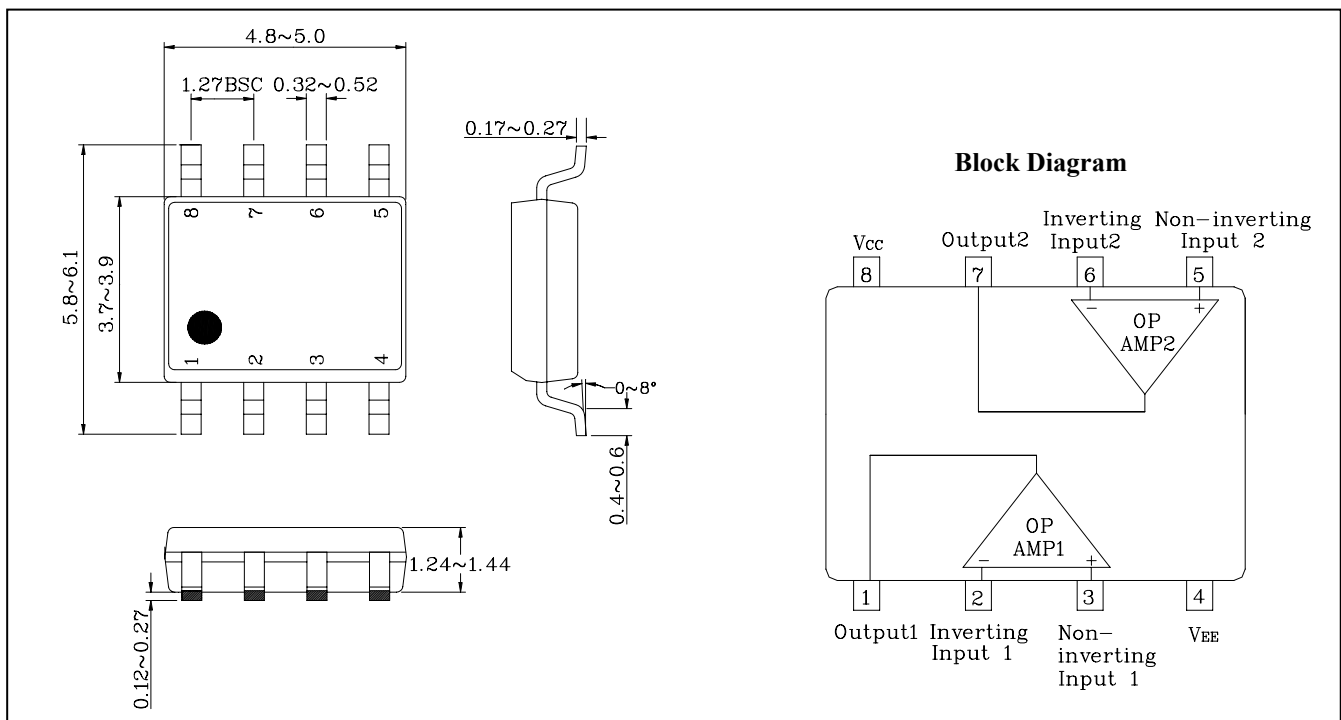
- Active filters
- Audio amplifiers
- VCOs
- Other electronic circuits

Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| A4558 | A4558 | SOP-8 |

Outline Dimensions

unit : mm



Absolute maximum ratings

| Characteristic | Symbol | Ratings | Unit |
|----------------------------|-----------|----------------|------|
| Supply voltage | V_{CC} | 20 or ± 10 | V |
| Differential input voltage | V_{IND} | 20 | V |
| Input voltage | V_{IN} | ± 10 | V |
| Power Dissipation | P_D | 300 | mW |
| Operating temperature | T_{opr} | -45 ~ +85 | °C |
| Storage temperature | T_{stg} | -55 ~ +150 | °C |

Electrical Characteristics

(Unless otherwise specified. $V_{CC} = +5V$, $V_{EE} = -5V$ and $T_a = 25\text{ °C}$)

| Parameter | Symbol | Test Conditions | Min. | Typ. | Max. | Unit |
|---------------------------------|--------------|---|-----------|-----------|------|------|
| Input Offset Voltage | V_{IOS} | $R_g \leq 10\text{ k}\Omega$ | 0 | 0.5 | 6 | mV |
| Input Offset Current | I_{IOS} | - | - | 5 | 200 | nA |
| Input Bias Current | I_{IB} | - | - | 60 | 500 | nA |
| Input Common Mode Voltage Range | V_{ICR} | - | ± 5 | ± 7 | - | V |
| Maximum Output Voltage | V_{OM} | $R_L = 10\text{ k}\Omega$ | ± 2.9 | ± 3.4 | - | V |
| | | $R_L = 2\text{ k}\Omega$ | ± 2.7 | ± 3.2 | - | V |
| Common Mode Rejection Ratio | CMRR | $R_g \leq 10\text{ k}\Omega$ | 70 | 90 | - | dB |
| Power Supply Rejection Ratio | PSRR | $R_g \leq 10\text{ k}\Omega$ | - | 30 | 150 | uV/V |
| Supply Current | I_{CC} | - | - | 3 | 6 | mA |
| Slew Rate | SR | $R_L \geq 2\text{ k}\Omega$ | - | 2 | - | V/us |
| Unity Gain Cross Frequency | f_T | Open Loop | - | 3 | - | MHz |
| Large Signal Voltage Gain | G_V | $V_{CC} = 8V$, $V_{EE} = -8V$, $R_L = 2K$ | 86 | 100 | - | dB |
| Output Sink Current | I_{SINK} | - | 15 | 25 | - | mA |
| Output Source Current | I_{SOURCE} | - | 15 | 25 | - | mA |

Electrical Characteristic Curves

Fig. 1 G_v -f

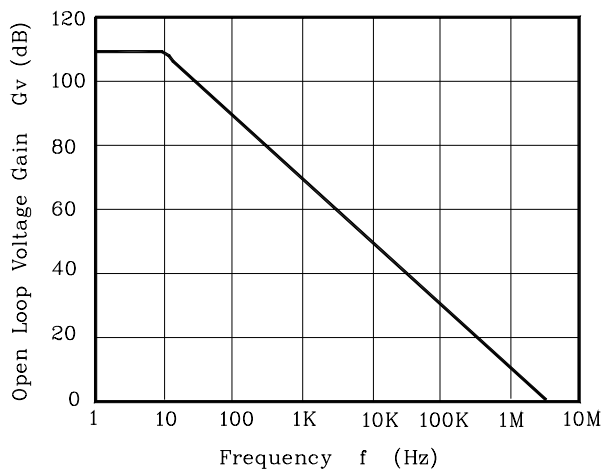


Fig. 2 V_{OPP} -f

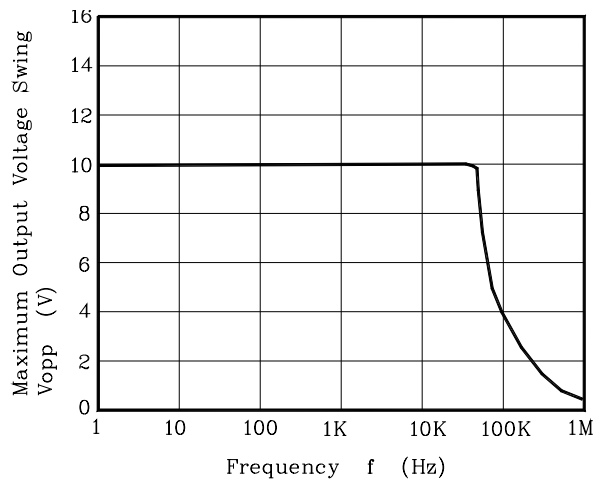


Fig. 3 I_{IB} - T_a

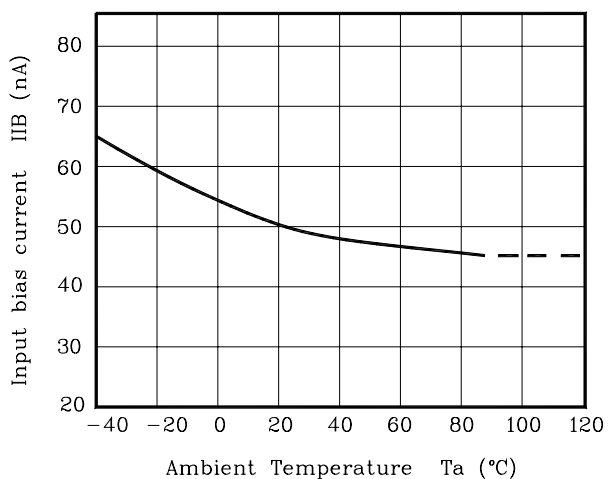
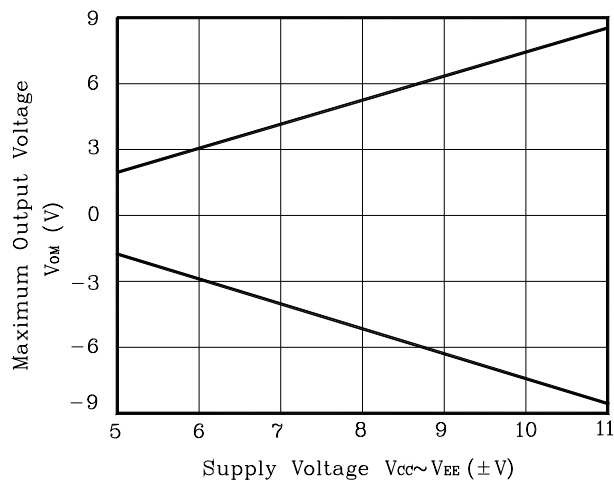


Fig. 4 V_{OM} - V_{CC} , V_{EE}



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