



S4558P

Low Noise Dual OP AMP

Description

The S4558 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

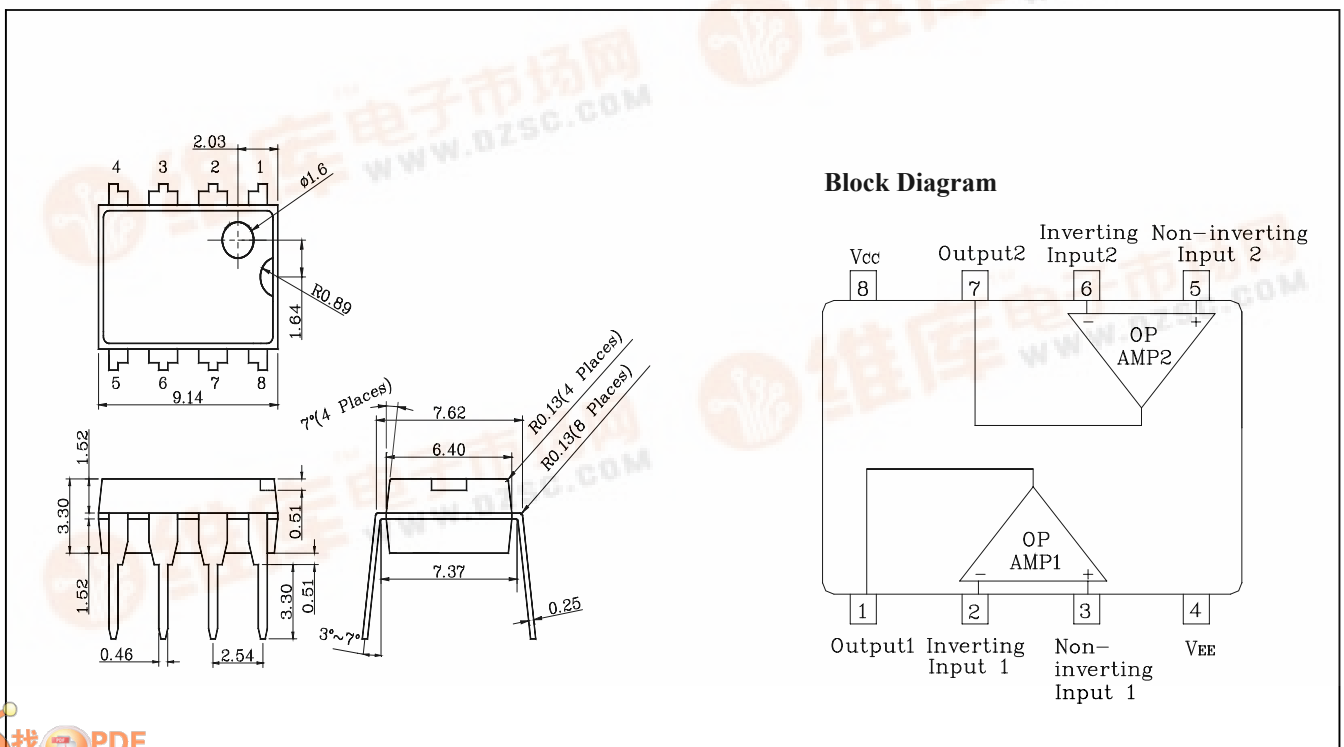
- Active filters
- Audio amplifiers
- VCOs
- Other electronic circuits

Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| S4558P | S4558P | DIP-8 |

Outline Dimensions

unit : mm



Absolute maximum ratings

| Characteristic | Symbol | Ratings | Unit |
|----------------------------|-----------|----------------|-------------|
| Supply voltage | V_{CC} | 36 or ± 18 | V |
| Differential input voltage | V_{IND} | 30 | V |
| Input voltage | V_{IN} | ± 15 | V |
| Power Dissipation | P_D | 500 | mW |
| Operating temperature | T_{opr} | -45 ~ +85 | $^{\circ}C$ |
| Storage temperature | T_{stg} | -55 ~ +150 | $^{\circ}C$ |

Electrical Characteristics

(Unless otherwise specified. $V_{CC} = +15V$, $V_{EE} = -15V$ and $T_a = 25^{\circ}C$)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---------------------------------|--------------|--|----------|----------|------|---------------|
| Input offset voltage | V_{IOS} | $R_g \leq 10\text{ k}\Omega$ | - | 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} | - | ± 12 | ± 14 | - | V |
| Maximum Output Voltage | V_{OM} | $R_L \geq 10\text{ k}\Omega$ | ± 12 | ± 14 | - | V |
| | | $R_L \geq 2\text{ k}\Omega$ | ± 10 | ± 13 | - | V |
| Large signal Voltage Gain | G_V | $V_{out} = \pm 10V$, $R_L \geq 2\text{ k}\Omega$ | 86 | 100 | - | dB |
| 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 | $\mu V/V$ |
| Slew Rate | SR | $G_V = 1$, $R_L \geq 2\text{ k}\Omega$ | - | 1.0 | - | V/ μs |
| Supply Current | I_{CC} | - | - | 4.0 | 6.0 | mA |
| Equivalent input noise voltage | V_{NI} | RIAA, $R_S = 1\text{ k}\Omega$, $f = 30\text{ Hz} \sim 30\text{ kHz}$ | - | 2.5 | - | μV_{rms} |
| Source Current | I_{SOURCE} | - | 27 | - | - | mA |
| Sink Current | I_{SINK} | - | 27 | - | - | mA |

Electrical Characteristic Curves

Fig. 1 $G_V - f$

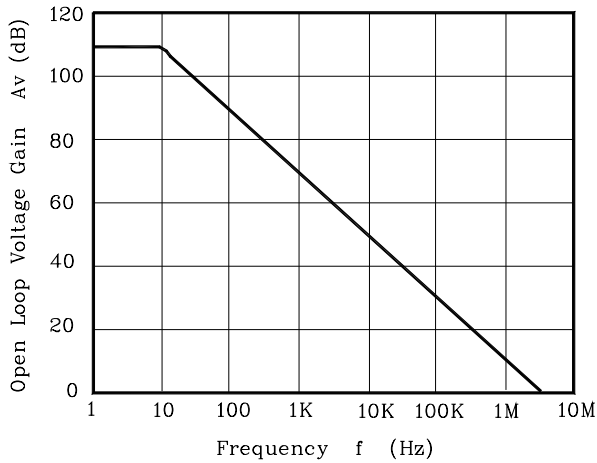


Fig. 2 $V_{OP-P} - f$

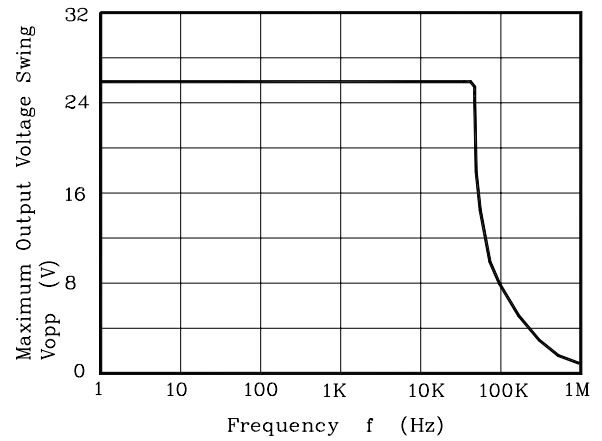


Fig. 3 $I_{IB} - T_a$

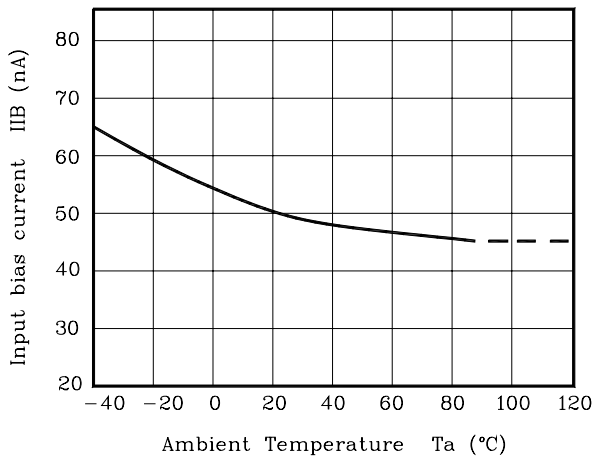


Fig. 4 $V_{OM} - V_{CC}, V_{EE}$

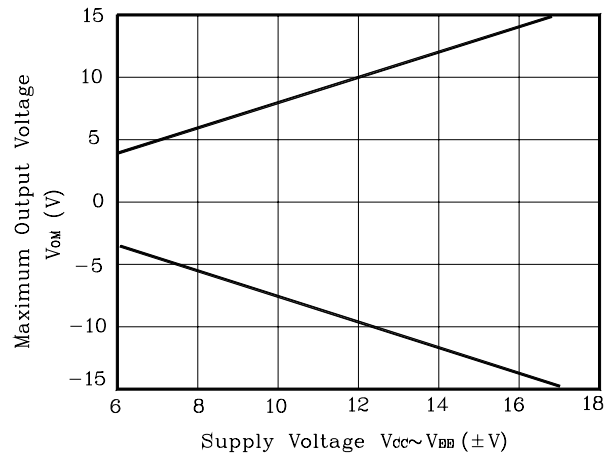


Fig. 5 $V_{OP-P} - R_L$

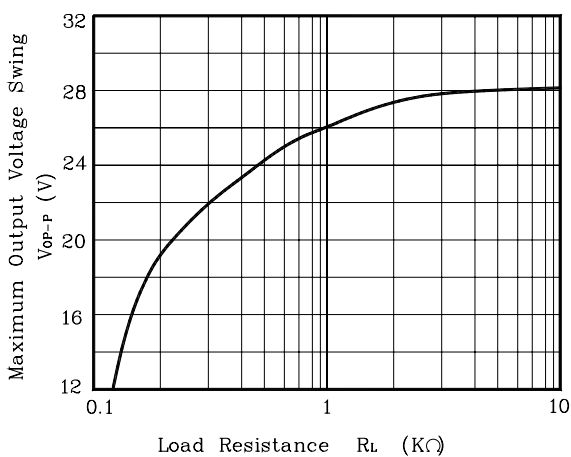


Fig. 6 $V_{NI} - f$

