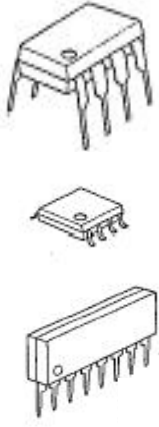


**SL4558**

## Dual Operational Amplifiers

The SL4558 is dual general purpose operational amplifiers. The high common-mode input voltage range and the absence of latch-up make these amplifiers ideal for voltage follower application. The devices are short circuit protected and the internal frequency Compensation ensures stability without external components.

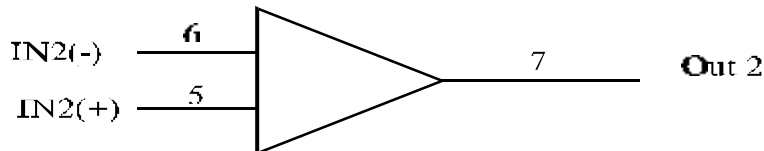
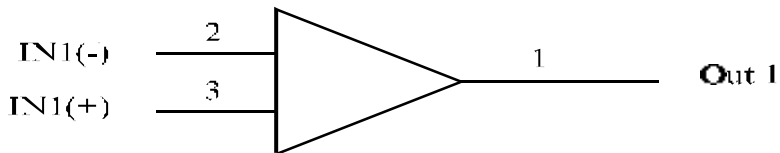
- Short Circuit Protection
- Wide common-mode and differential ranges
- No frequency compensation required
- Low power consumption
- No latch-up
- 3 MHz unity gain bandwidth guaranteed
- Gain and phase match between amplifiers
- Possible to exchange the position of Pin9 for Pin1 because of Pin Connection being symmetric(SL4558S only)



**ORDERING INFORMATION**

SL4558N Plastic  
 SL4558D SOIC  
 SL4558S SIP-8  
 $T_A = -20^\circ$  to  $70^\circ$  C  
 for all packages.

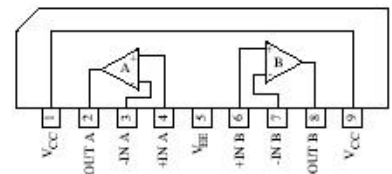
### BLOCK DIAGRAM



PIN 4 = GND (V)  
 PIN 8 = V<sub>CC</sub> (V+)

### PIN ASSIGNMENT

OUT 1	1 ●	8	V <sub>CC</sub>
IN 1(-)	2	7	OUT 2
IN 1(+)	3	6	IN 2(-)
GND	4	5	IN 2(+)



**MAXIMUM RATINGS\***

Symbol	Parameter	Value	Unit
V <sup>+</sup>	Supply Voltage	18	V
V	Supply Voltage	-18	V
V <sub>IDR</sub>	Differential Input Voltage	±30	V
V <sub>IN</sub>	Input Voltage	±15	V
P <sub>D</sub>	Power Dissipation in Still Air	570	mW
T <sub>a</sub>	Operation Temperature Range	-20 to 70	°C
T <sub>stg</sub>	Storage Temperature Range	-55 to 125	°C

\* Maximum Ratings are those values beyond which damage to the device may occur. Functional operation should be restricted to the Recommended Operating Conditions.

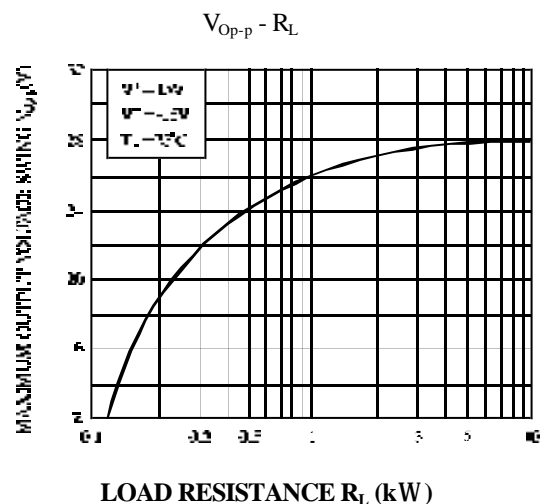
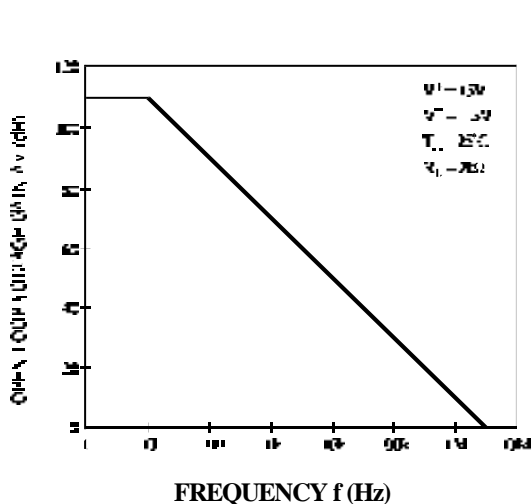
**RECOMMENDED OPERATING CONDITIONS**

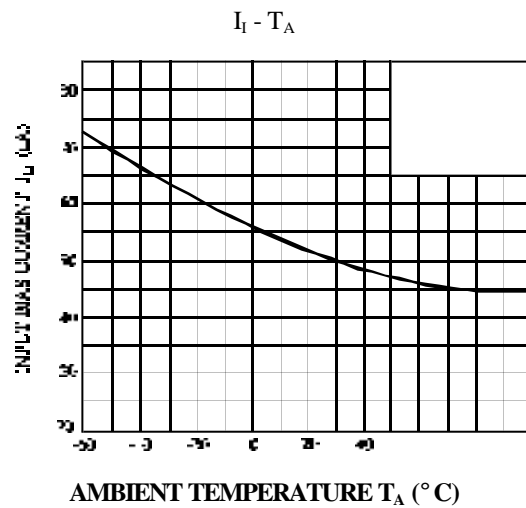
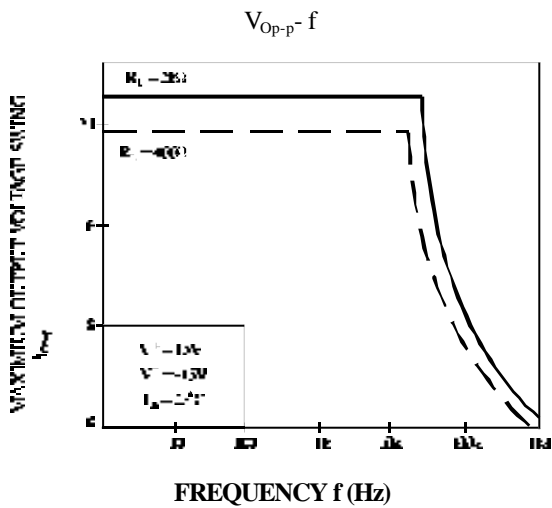
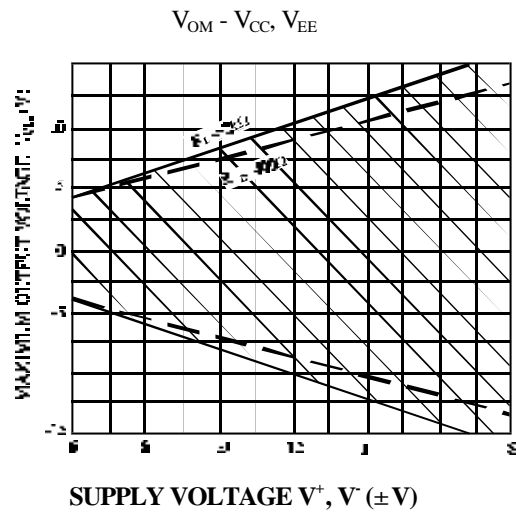
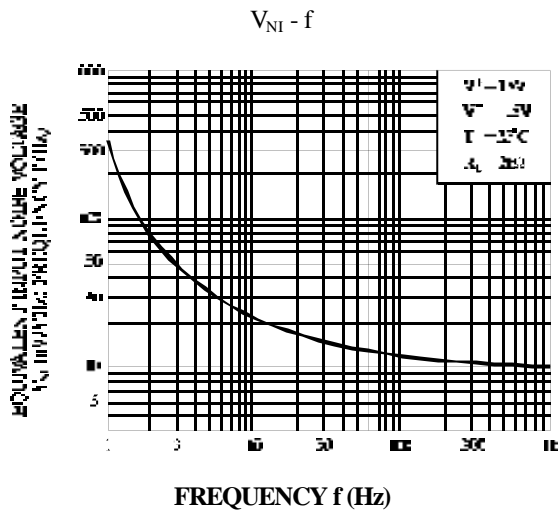
Symbol	Parameter	Min	Max	Unit
V <sup>+</sup>	Supply Voltage		16	V
V	Supply Voltage		-16	V

**ELECTRICAL CHARACTERISTICS**( $T_A = 25^\circ\text{C}$ ,  $V^+ = +15\text{ V}$ ,  $V^- = -15\text{ V}$ )

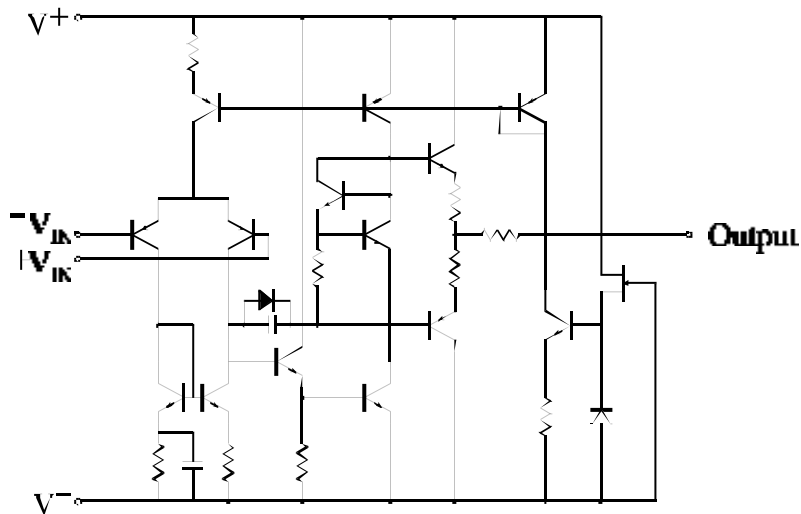
Symbol	Parameter	Test Conditions	Guaranteed Limits		Unit
			Min	Max	
$V_{IO}$	Input Offset Voltage	$R_S \leq 10\text{K}\Omega$		$\pm 5.0$	mV
$I_{IO}$	Input Offset Current			$\pm 200$	nA
$I_{IB}$	Input Bias Current			- 500	nA
$r_i$	Input Resistance		0.3		$\text{M}\Omega$
$A_V$	Large-Signal Voltage Gain	$R_L \geq 2\text{K}\Omega$ , $V_C = \pm 10\text{V}$	20		V/mV
$V_{OM}$	Output Voltage Swing	$R_L \geq 10\text{K}\Omega$	$\pm 12$		V
		$R_L \geq 2\text{K}\Omega$	$\pm 10$		V
$V_{ICR}$	Input Common-Mode Voltage Range		$\pm 12$		V
CMRR	Common Mode Rejection Ratio	$R_S \leq 10\text{K}\Omega$	70		dB
PSRR	Supply Voltage Rejection Ratio	$R_S \leq 10\text{K}\Omega$		150	$\mu\text{V}/\text{V}$
SR	Slew Rate	$R_L \geq 2\text{K}\Omega$	0.8	1.6	
$I^+, I^-$	Supply Current			5.6	mA
SR	Slew Rate	$R_L = 2\text{K}\Omega$			$\text{V}/\mu\text{s}$
$P_C$	Power Consumption	$R_L = \infty$		170	mW
$V_N$	Input Noise Voltage	$R_S = 1\text{K}\Omega$ $f = 30\text{Hz} \sim 30\text{KHz}$		3.5	$\mu\text{Vrms}$
$I_{\text{source}}$	Source Current		- 20		mA
$I_{\text{sink}}$	Sink Current		20		mA

**TYPICAL PERFORMANCE CURVES**





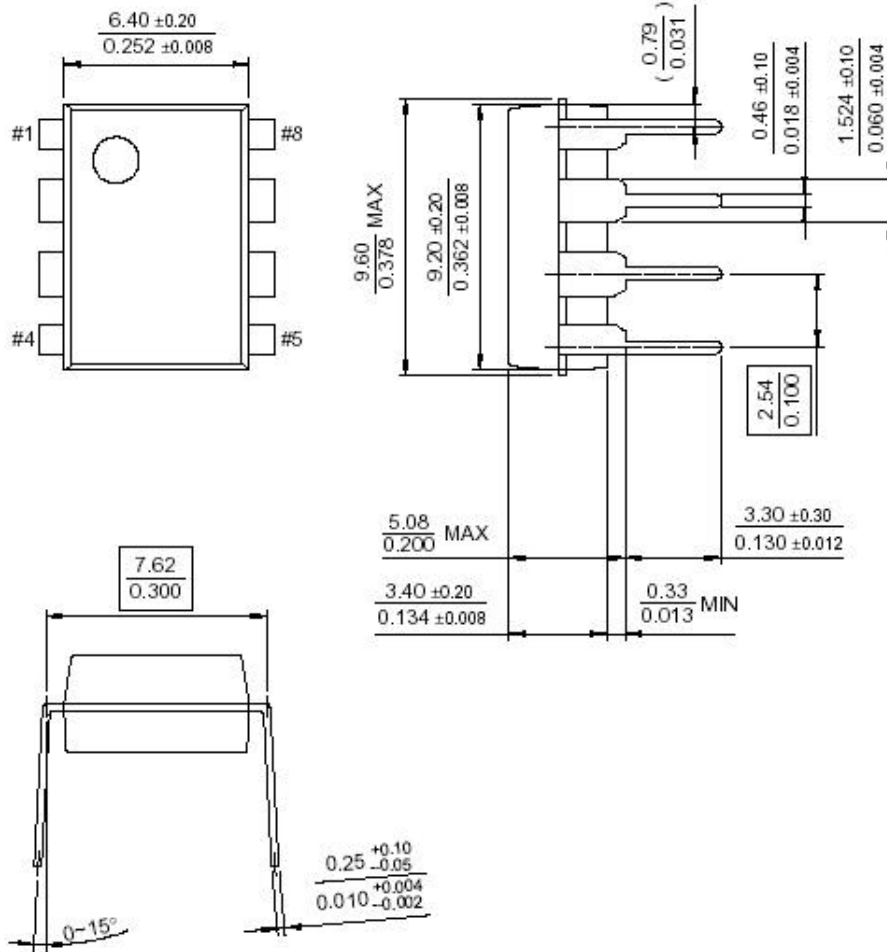
**Schematic Diagram (Each Amplifier)**



Mechanical Dimensions

Package

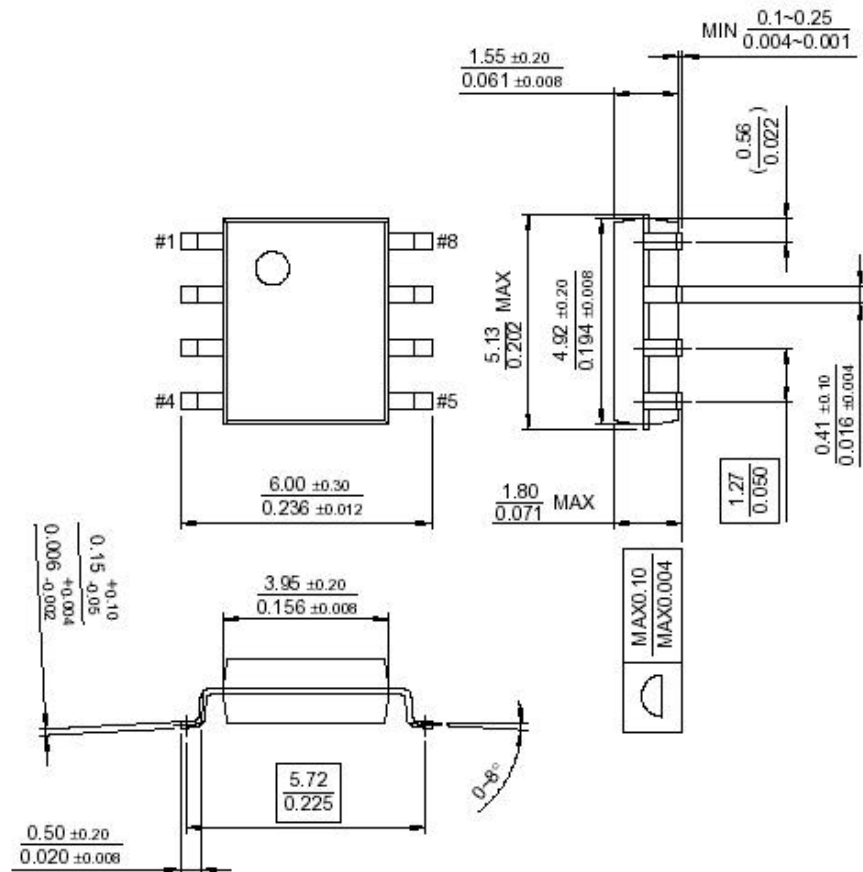
8-DIP



Mechanical Dimensions (Continued)

Package

8-SOP



Mechanical Dimensions (Continued)

Package

9-SIP

