



LA6511

## Power Operational Amplifier

## Overview

The LA6511 is a BLT-dedicated 1-channel driver developed for use in consumer and industrial equipment. (Do not use with  $\pm$  power supply)

## Features and Functions

- High output current ( $I_O$  max = 2.0 A)
- High gain
- Wide operating voltage range (4 to 24 V)
- Includes mute circuit (active low)

## Specifications

Maximum Ratings at  $T_a = 25\text{ }^\circ\text{C}$ 

Parameter	Symbol	Ratings	Unit
Maximum supply voltage	$V_{CCmax}$	24	V
Differential input voltage	$V_{ID}$	24	V
Input common-mode voltage range	$V_{IN}$	24	V
Allowable power dissipation	$Pd$ max	3.1	W
Operating temperature	$T_{opr}$	-20 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Operating Characteristics at  $T_a = 25\text{ }^\circ\text{C}$ ,  $V_{CC} = 12\text{V}$ 

Parameter	Symbol	Conditions	min	typ	max	Unit
Current drain with no load	$I_{CC}$		17	25	35	mA
Input offset voltage	$V_{IO}$	$R_S \leq 10\text{ k}\Omega$		3	7	mV
Input offset voltage difference	$DV_{IO}$	$R_S \leq 10\text{ k}\Omega$		1	3	mV
Input offset current	$I_{IO}$			10	100	nA
Input bias current	$I_B$			50	500	nA
Input common-mode voltage range	$V_{ICM}$		0.5		10	V
Common-mode signal rejection ratio	CMR		70	80		dB
Maximum output voltage	$V_O$	$R_L = 8.0\ \Omega$		8		V
Voltage gain	$V_{GO}$			85		dB
Slew rate	SR			0.15		V/ $\mu\text{s}$
Supply voltage rejection ratio	SVR			30		$\mu\text{V/V}$
Mute-off voltage	$V_{MOFF}$			1.0		V
Mute pin output current	$I_{MUTE}$			40		$\mu\text{A}$

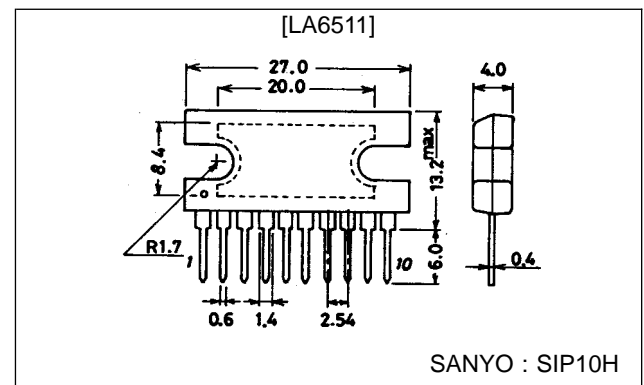
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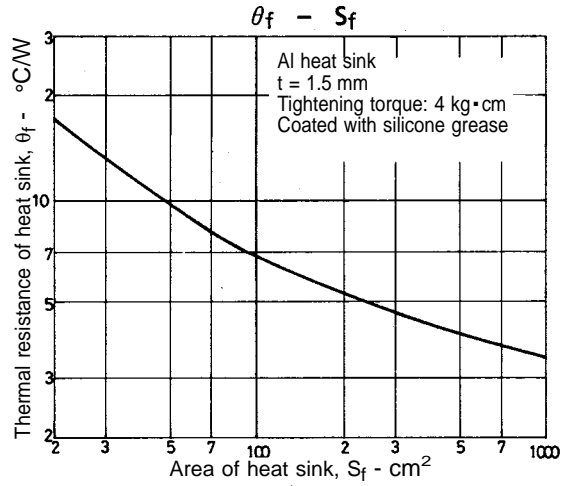
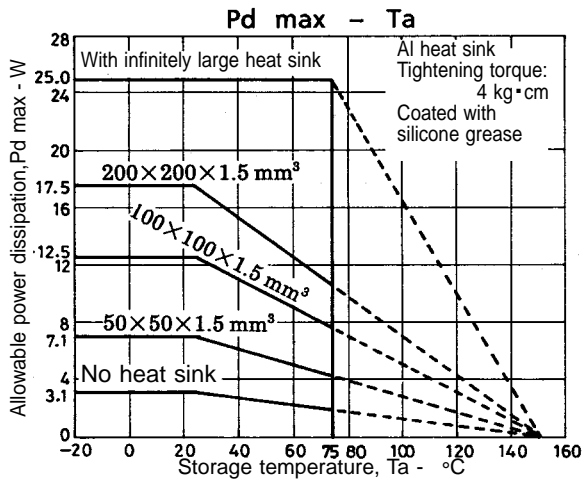
- Thermal shutdown function on chip.
- The mute voltage operates versus the  $V_{Mref}$  voltage.

## Package Dimensions

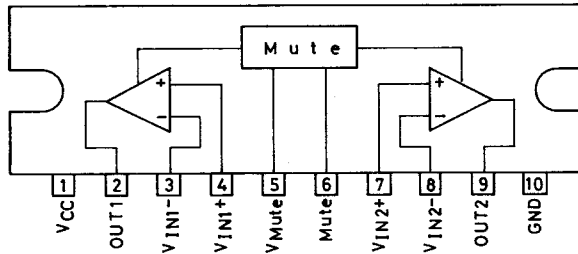
unit : mm

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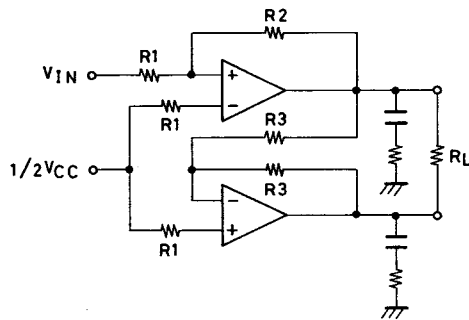




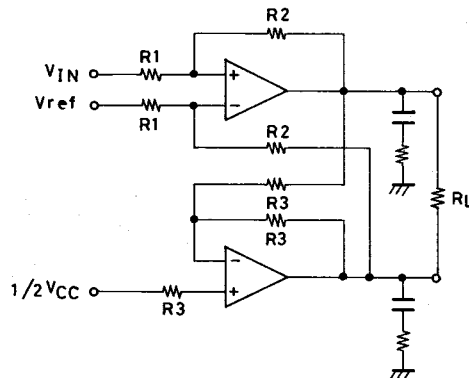
**Pin Assignment**



**Sample Application Circuit**



$$\text{Gain} = 20 \log \frac{R2}{R1} + 6\text{dB}$$



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