



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/ μs
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		μA

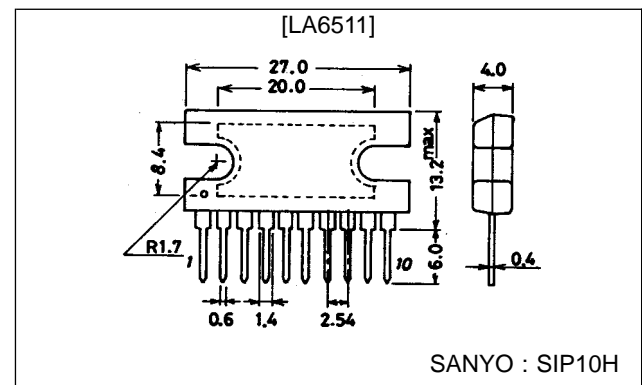
Notes)

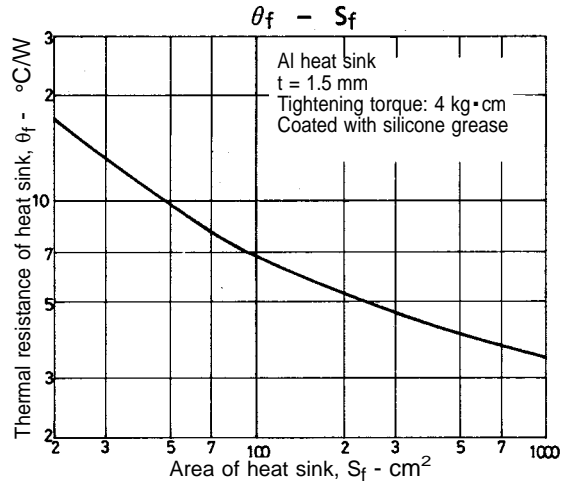
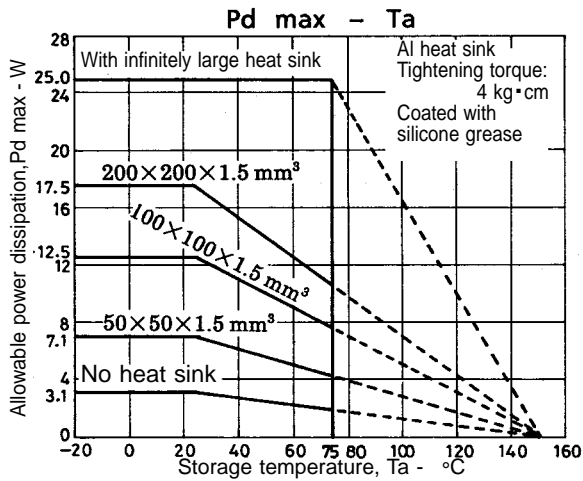
- Thermal shutdown function on chip.
- The mute voltage operates versus the V_{Mref} voltage.

Package Dimensions

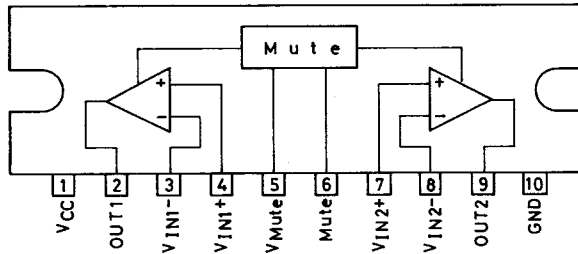
unit : mm

3024A-SIP10H

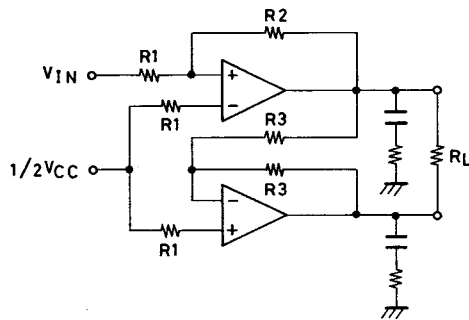




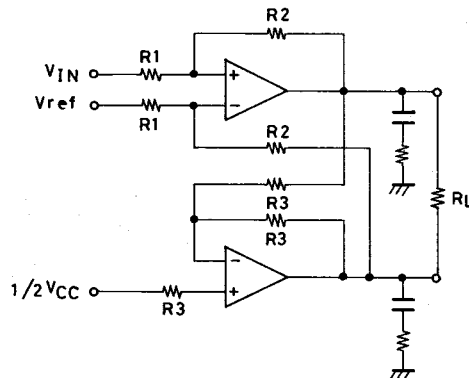
Pin Assignment



Sample Application Circuit



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



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

- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of May, 1995. Specifications and information herein are subject to change without notice.