Ordering number:ENN2612A

Monolithic Linear IC

LA6515

0.5A Power Operational Amplifier

Overview

The LA6515 is a high-performance power operational amplifier IC capable of delivering larger output currents than conventional operational amplifiers.

The LA6515 features an on-chip current limiter and provides high voltage gain and a high common-mode rejection ratio.

The LA6515 is an ideal choice for power applications such as DC servos, capstan drivers, actuator drivers, programmable power supplies and high-quality audio amplifiers.

The LA6515 is available in 10-pin SIPs and operates from –15V and 15V supplies.

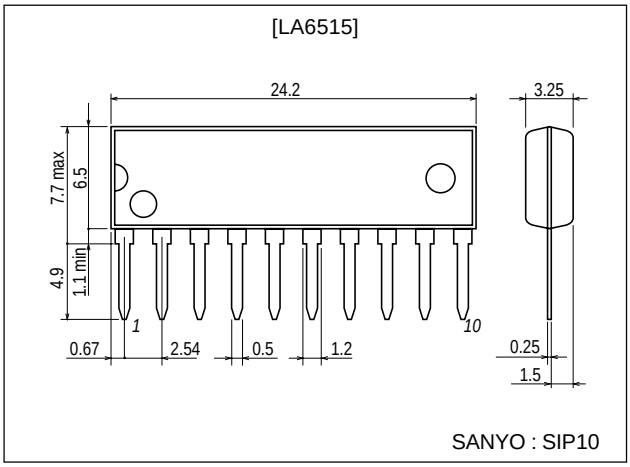
Features

- 0.5A output current.
- 100dB voltage gain.
- 80dB common-mode rejection.
- 0.15 V/μs slew rate.
- 2mV offset voltage.
- 10nA offset current.
- On-chip current limiter.
- –15V and 15V supplies.
- 10-pin SIP.

Package Dimensions

unit:mm

3043A-SIP10



Specifications

Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V_{CC}/V_{EE}		±18	V
Differential input voltage	V_{ID}		30	V
Common-mode input voltage	V_{ICM}		±15	V
Output current	I_O max		1.0	A
Allowable power dissipation	Pd max		1.3	W
Operating temperature	Topr		–20 to +75	˚C
Storage temperature	Tstg		–55 to +150	˚C

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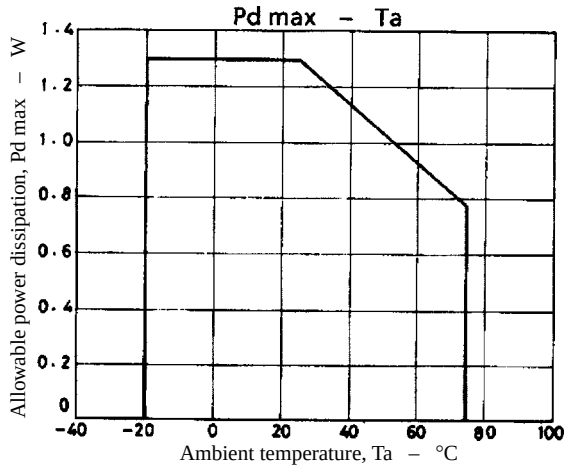
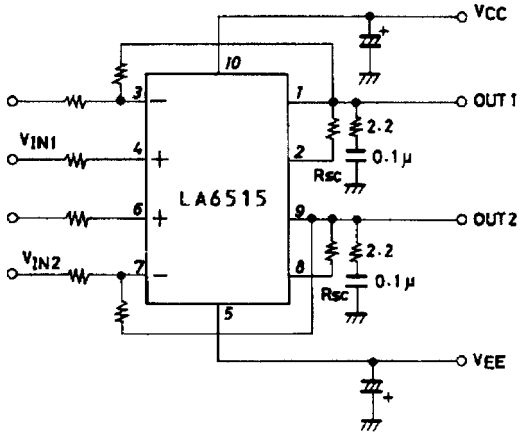
Electrical Characteristics at Ta = 25°C, V_{CC}/V_{EE}=±15V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{CCO}		6	12	20	mA
Input offset voltage	V_{IO}	R_S≤10kΩ		2	6	mV
Input offset current	I_{IO}			10	200	nA
Input bias current	I_B			100	700	nA
Common-mode input voltage range	V_{ICM}		–15		+13	V
Common-mode rejection	CMR		70	80		dB
Maximum output voltage	V_O	R_L=33Ω	±12	±13		V
Voltage gain	VG_O			100		dB
Slew rate	SR	GV=0, R_L=33Ω, R=2.2Ω, L=0.1μF		0.15		V/μs
Equivalent input noise voltage	V_{NI}	Rg=1kΩ, DIN AUDIO		2		μV
Supply voltage rejection ratio	SVRR			30	150	μV/V
Limiting current	I_{SC}	R_{SC}=2.2Ω		0.35		A



Sample Application Circuit



Pin Assignment