



SANYO Semiconductors

DATA SHEET

LA6515 — Monolithic Linear IC

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.
- $0.15\text{V}/\mu\text{s}$ slew rate.
- 2mV offset voltage.
- 10nA offset current
- On-chip current limiter.
- -15V and 15V supplies.
- 10-pin SIP.

Specifications

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

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	P_d max		1.3	W
Operating temperature	T_{opr}		-20 to $+75$	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to $+150$	$^\circ\text{C}$

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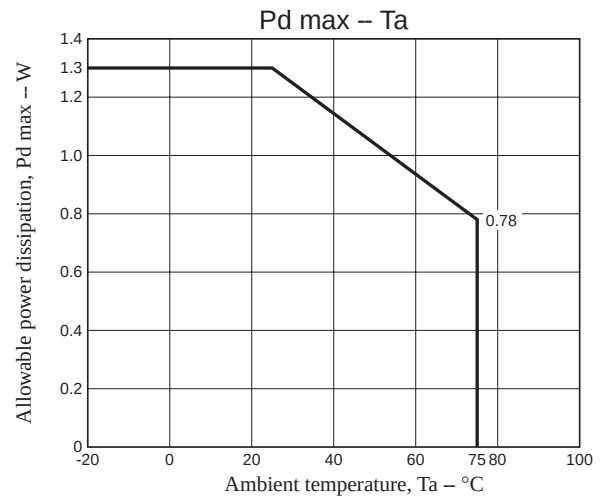
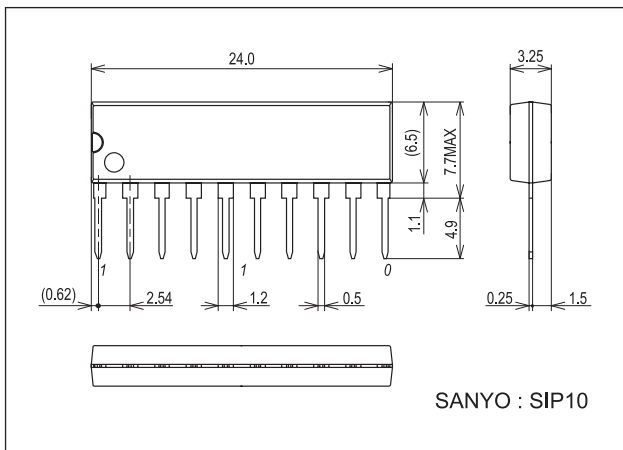
LA6515

Electrical Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC}/V_{EE} = \pm 15\text{V}$

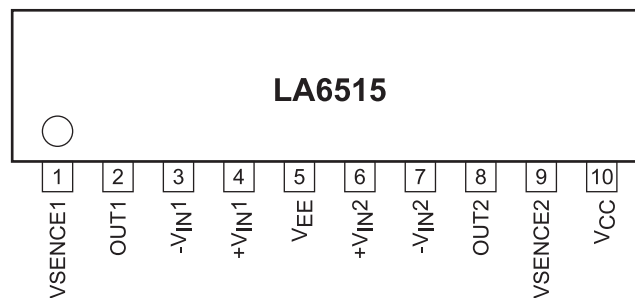
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{CCO}		6	12	20	mA
Input offset voltage	V_{IO}	$R_S \leq 10\text{k}\Omega$		2	6	mV
Input offset current	I_{IO}			10	200	nA
Input bias current	I_B			100	700	nA
Common-mode input voltage range	V_{ICM}		-15		+13	V
Common-mode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

Package Dimensions

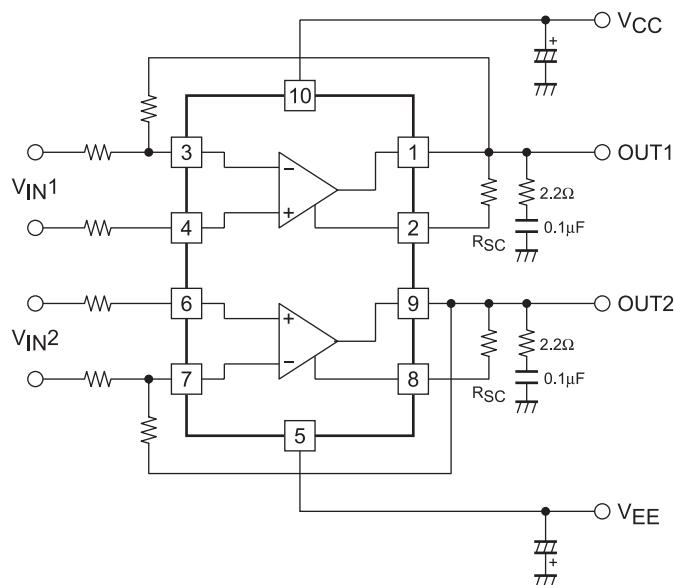
unit : mm (typ)
3043C



Pin Assignment



Sample Application Circuit



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