



LA6533

2-Channel BTL-Use or 4-Channel Driver

Overview

The LA6533 is a 2-channel BTL-use driver designed for compact disc pickup actuation or a 4-channel driver for general-purpose applications.

Functions and Features

- High output current ($I_O \text{ max}=0.5\text{A}$).
- Wide operating voltage range (4 to 15V).
- Low input bias current.
- On-chip thermal shutdown.
- Output of amps 1 to 4 at muting-ON mode:OFF.

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC} \text{ max}$		16	V
Allowable power dissipation	$P_d \text{ max}$		1.9	W
Maximum input voltage	$V_{INB} \text{ max}$	Buffer amplifier	15	V
Muting pin current	$I_M \text{ max}$		1	mA
Maximum output current	$I_O \text{ max}$		0.7	A
Operating temperature	T_{opr}		-20 to +75	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Operating Conditions at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC}		5	V
Load resistance	R_L	Pins 3 to 6, 11 to 14	8	Ω

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC}=5.0\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
No-loaded current drain 1	I_{CC1}	Mute OFF, Note1	5	10	20	mA
No-loaded current drain 2	I_{CC2}	Mute ON	3	7	15	mA
No-loaded current drain 3	I_{CC3}	Mute OFF, Note2	10	20	30	mA
No-loaded current drain 4	I_{CC4}	Mute ON	4	8	16	mA

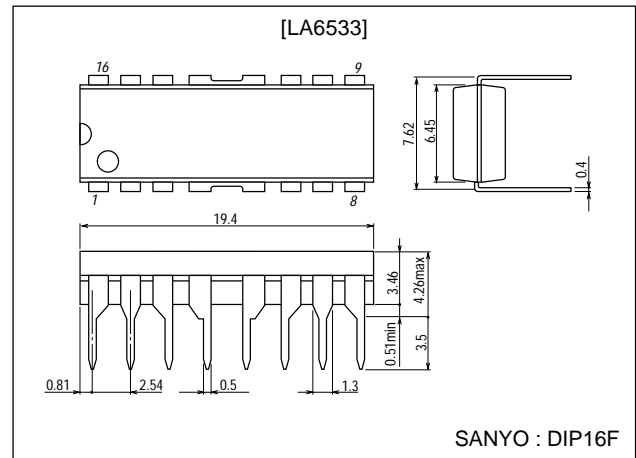
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Package Dimensions

unit:mm

3054A-DIP16F



LA6533

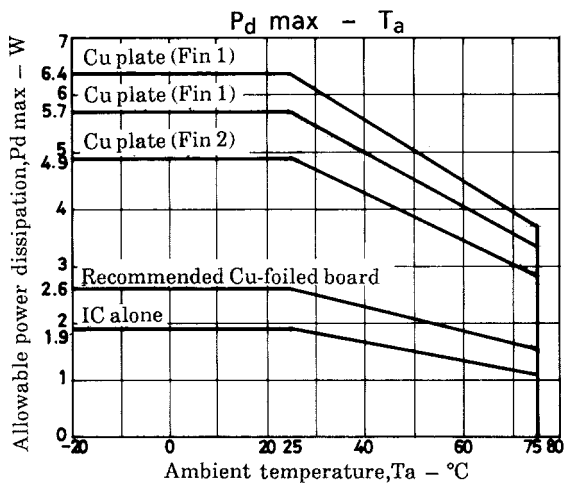
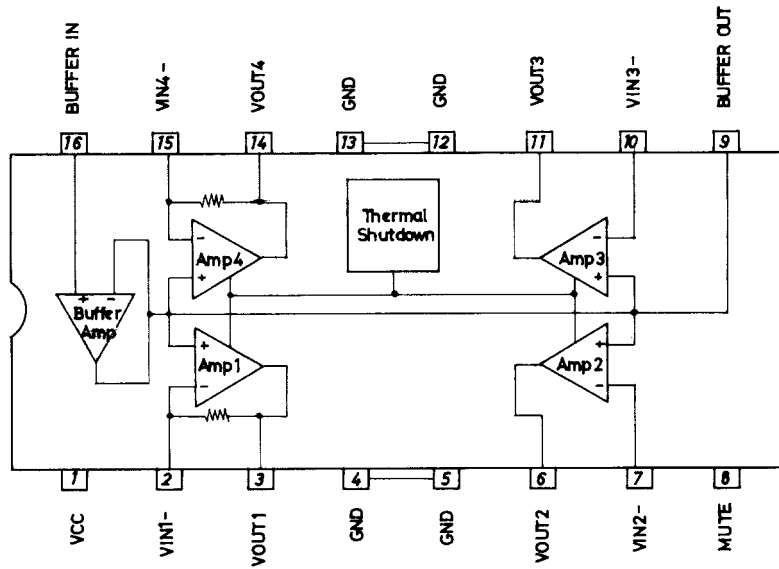
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output offset voltage 1	V_{OF1}	Out 1 and Out 2	-50		+50	mV
Output offset voltage 2	V_{OF2}	Out 3 and Out 4	-50		+50	mV
Buffer input-output voltage difference	V_{BIO}	Buffer amplifier	-30		+30	mV
Buffer input voltage range	V_{BICM}	Buffer amplifier	1.5		$V_{CC}-1.5$	V
Amp input voltage range	V_{ICM}		1.0		$V_{CC}-1.5$	V
Input bias current	I_B			50		nA
Output voltage	V_O	$R_L=8.0\Omega$	2.8	3.3		V
Bridge output voltage difference	V_{OD}	8Ω load between pins 3 and 6, 11 and 14.	1.8	2.2		V
Closed-circuit voltage gain	V_G			6.0		dB
Muting pin on-state voltage	V_M			0.7		V
Muting pin flow-in current	I_M			3.0		μA

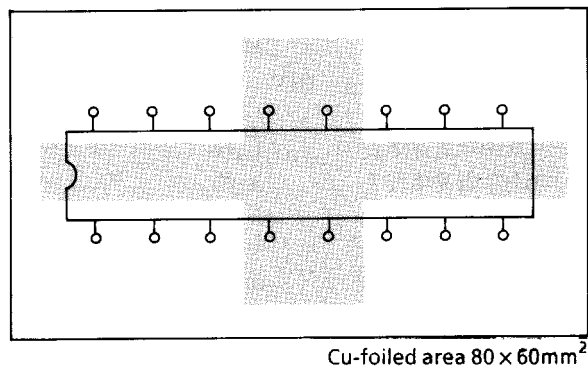
Note 1) Pins 2, 7, 10, 15 : GND

Note 2) Pins 2, 7, 10, 15 : $1/2V_{CC}$

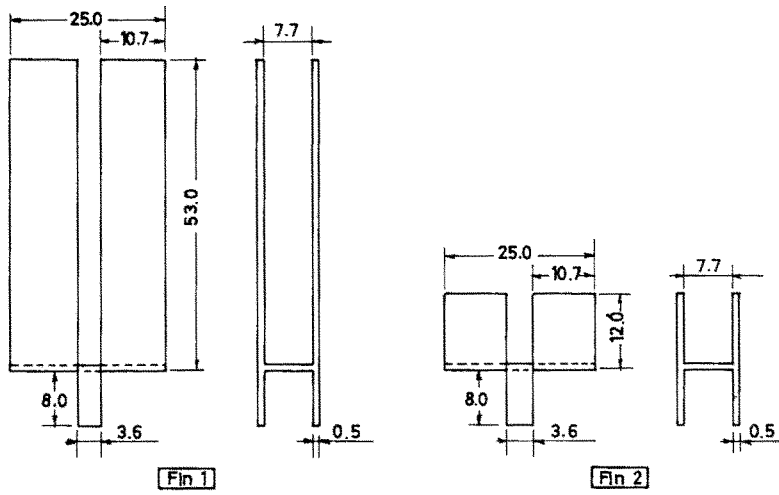
Equivalent Circuit Block Diagram



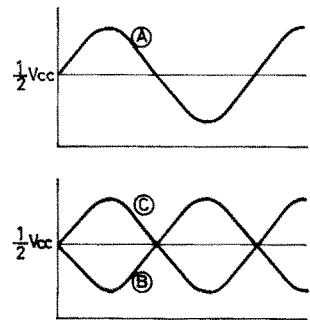
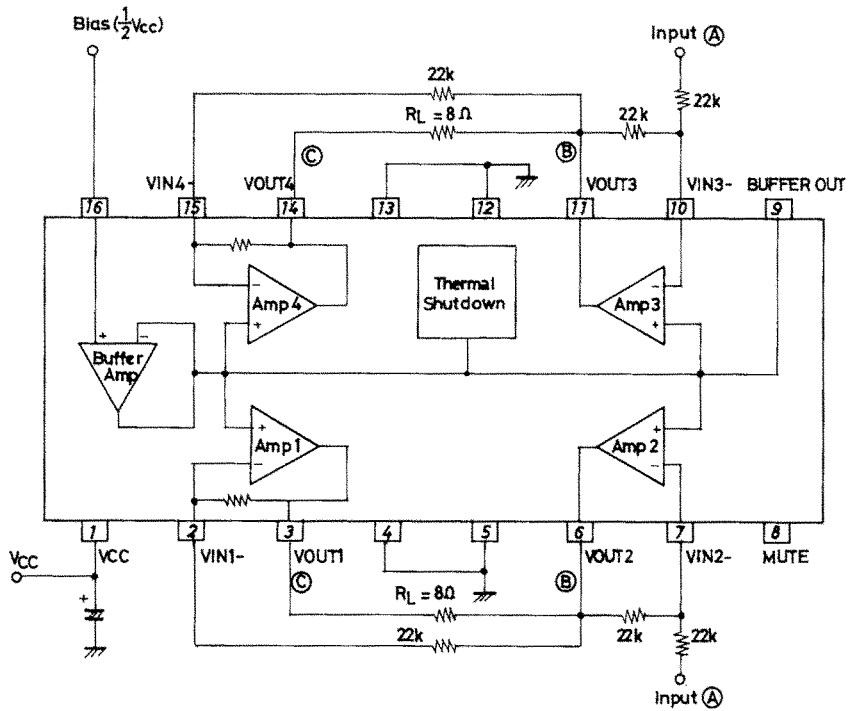
Sample Printed Circuit Pattern



LA6533



Sample Application Circuit



Unit (resistance: Ω capacitance: F)

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