



# LA6530, 6531

## 2-Channel BTL-Use Drivers

### Overview

The LA6530, 6531 are 2-channel BTL-use drivers designed for compact disc pickup actuation.

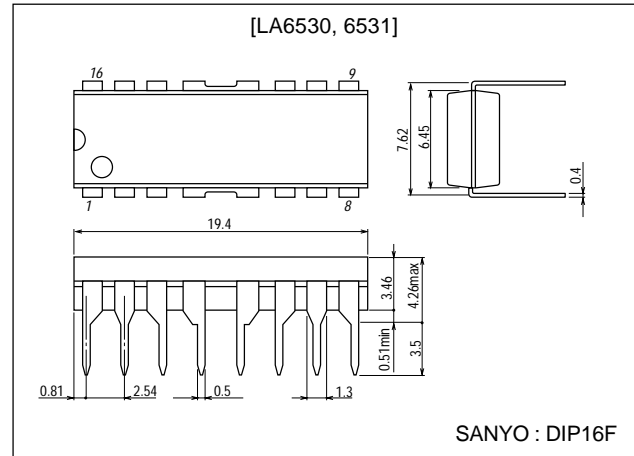
### Functions and Features

- High output current ( $I_O \text{ max}=0.7\text{A}$ ).
- Wide operating voltage range (4 to 15V),
- Low input bias current.
- LA6530 ..... Output of amps 1 to 4 at muting-ON mode : OFF
- LA6531 ..... Output of amps 1 to 4 and buffer amplifier at muting-ON mode : OFF

### Package Dimensions

unit:mm

3054A-D16F



### 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
Differential input voltage	$V_{ID}$	Amplifier 2, amplifier 3	15	V
Common-mode input voltage	$V_{ICM}$	Amplifier 2, amplifier 3	15	V
Maximum input voltage	$V_{INB \text{ max}}$	Buffer amplifier	15	V
Maximum flow-in current at muting pin	$I_M \text{ max}$		1.0	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	$V_{CC \text{ max}}$		5	V
Load resistance	$R_L$		8	$\Omega$

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# LA6530, 6531

## 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, pins 8, 9, 16 GND	5	10	20	mA
No-loaded current drain 2	$I_{CC2}$	Mute OFF, pins 8, 9, 16 GND	3	7	15	mA
No-loaded current drain 3	$I_{CC3}$	Mute OFF, pins 8, 9, 16 $1/2 V_{CC}$	10	20	30	mA
No-loaded current drain 4	$I_{CC4}$	Mute OFF, pins 8, 9, 16 $1/2 V_{CC}$	4	8	16	mA
Output offset voltage 1	$V_{OF1}$	Out 1 - Out 2	-50		+50	mV
Output offset voltage 2	$V_{OF2}$	Out 4 - Out 3	-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
Common-mode input voltage range	$V_{ICM}$	Amplifier 2, amplifier 3	1.0		$V_{CC}-1.5$	V
Input bias current	$I_B$			50	300	nA
Output voltage	$V_O$	$R_L = 8.0\Omega$	2.8	3.3		V
Bridge output voltage difference	$V_{OD}$	Pins 3-6, 11-14 $8\Omega$ load	1.8	2.2		V
Closed-circuit voltage gain	$V_G$		30	38		dB
Muting pin ON-state voltage	$V_M$			0.7		V
Muting pin flow-in current	$I_M$			3		$\mu\text{A}$

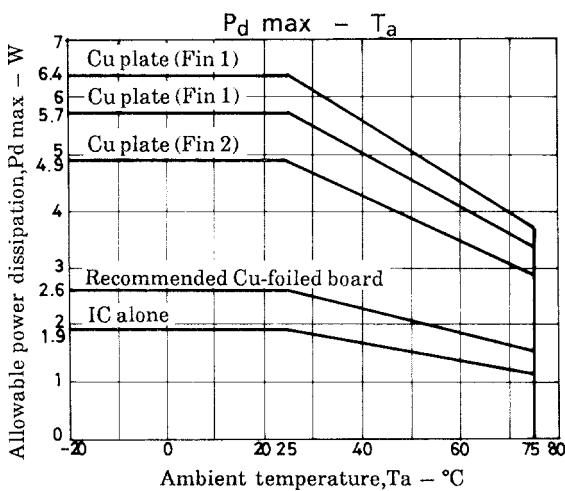
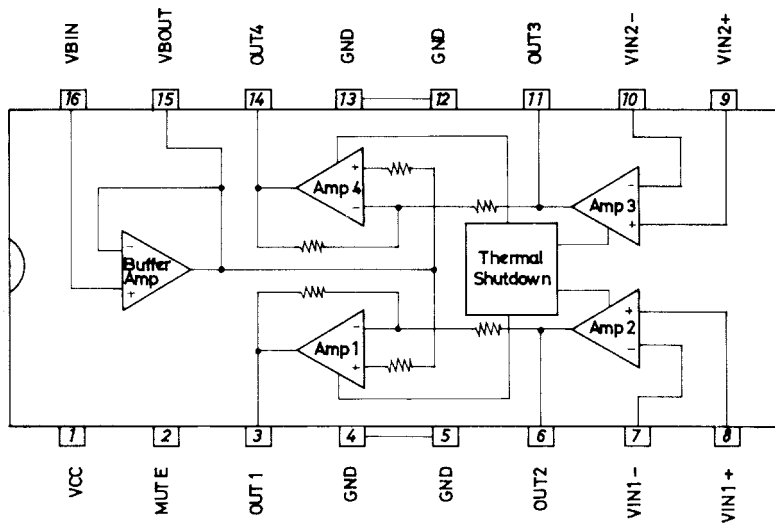
Note ) With thermal shutdown function

\* : The LA6530 is so designed that the outputs at OUT1 to OUT4 are turned OFF and the output at VBOUT is not turned OFF at the muting-ON mode.

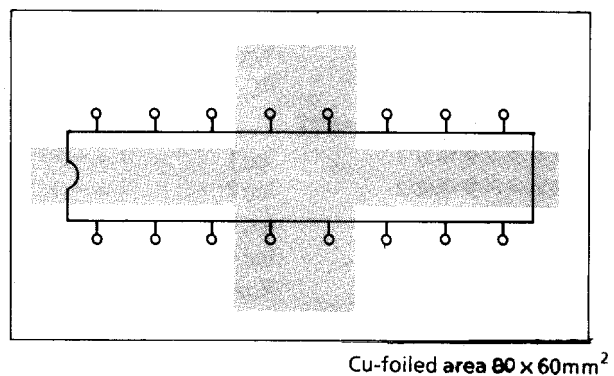
\* : The LA6531 is so designed that the outputs at OUT1 to OUT4 and the output at VBOUT are turned OFF.

\* : Be careful in handling the LA6530, 6531, because dielectric breakdown is liable to occur.

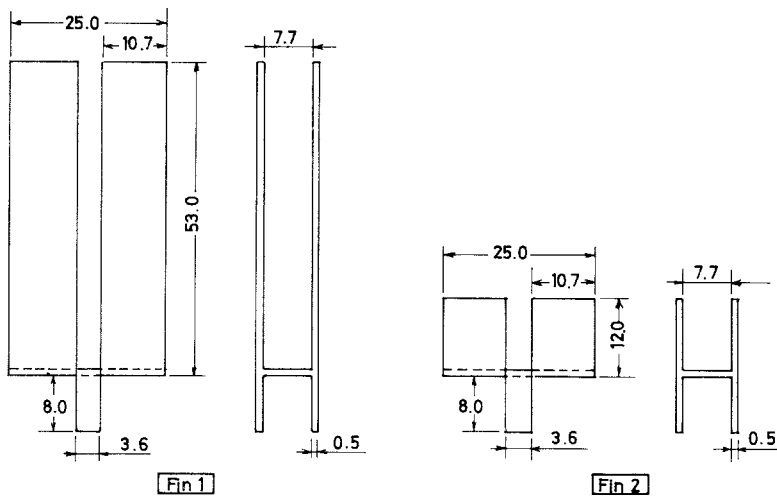
## Equivalent Circuit Block Diagram



## Sample Printed Circuit Pattern



Cu-foiled area  $80 \times 60\text{mm}^2$



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