

SANYO Semiconductors **DATA SHEET**

LA6531

Monolithic Linear IC

2-Channel BTL-Use Drivers

Overview

The LA6531 are 2-channel BTL-use drivers designed for compact disc pickup actuation.

Functions and Features

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

Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max		16	V
Differential input voltage	V_{ID}	Amplifier 2, amplifier 3	15	V
Common-mode input voltage	VICM	Amplifier 2, amplifier 3	15	V
Maximum input voltage	V _{INB} max	Buffer amplifier	15	V
Maximum flow-in current at muting pin	I _M max		1.0	mA
Maximum output current	I _O max		0.7	Α
Allowable power dissipation	Pd max		1.9	W
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-55 to +150	°C

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Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max		5	V
Load resistance	RL		8	Ω

Electrical Characteristics at Ta = 25°C, $V_{CC} = 5.0V$

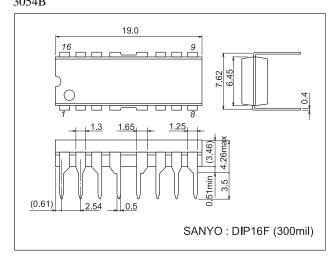
Parameter	Symbol	Conditions		Ratings		
			min	typ	max	Unit
No-loaded current drain 1	I _{CC} 1	Mute OFF, pins 8, 9, 16 GND	5	10	20	mA
No-loaded current drain 2	I _{CC} 2	Mute OFF, pins 8, 9, 16 GND	3	7	15	mA
No-loaded current drain 3	I _{CC} 3	Mute OFF, pins 8, 9, 16 1/2 V _{CC}	10	20	30	mA
No-loaded current drain 4	I _{CC} 4	Mute OFF, pins 8, 9, 16 1/2 V _{CC}	4	8	16	mA
Output offset voltage 1	V _{OF} 1	Out 1 - Out 2	-50		+50	mV
Output offset voltage 2	V _{OF} 2	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	VICM	Amplifier 2, amplifier 3	1.0		V _{CC} -1.5	V
Input bias current	ΙΒ			50	300	nA
Output voltage	٧o	$R_L = 8.0 \Omega$	2.8	3.3		V
Bridge output voltage difference	V _{OD}	Pins 3-6, 11-14 8Ω load	1.8	2.2		V
Closed-circuit voltage gain	V _G		30	38		dB
Muting pin ON-state voltage	٧ _M			0.7		V
Muting pin flow-in current	I _M			3		μА

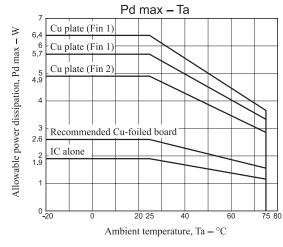
Note) With thermal shutdown function

- st : The LA6531 is so designed that the outputs at OUT1 to OUT4 and the output at VBOUT are turned OFF.
- st : Be carefull in handling the LA6531, because dielectric breakdown is liable to occur.

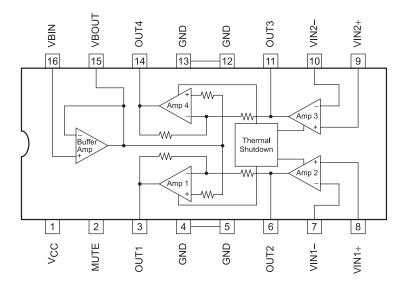
Package Dimensions

unit : mm (typ) 3054B

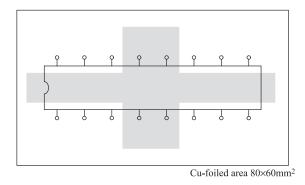


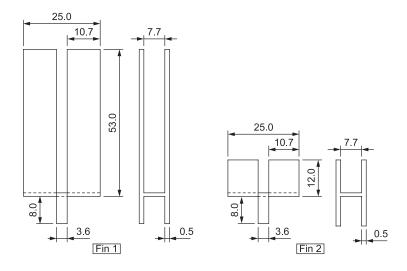


Block Diagram



Sample Printed Circuit Pattern





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