Monolithic Linear IC

LA6535M



# Four-Channel Bridge Driver for Compact Disc Players

# Overview

The LA6535M is a four-channel bridge driver IC with output muting. It features 700 mA per channel (max) output current, making it ideal for use in compact disc players.

The LA6535M operates from a 5V supply and is available in 30-pin MFPs.

# Features

- Four-channel bridge connection (BTL) power amplifier.
- Output muting.
- 700 mA per channel (max) output current.
- 5V supply.
- 30-pin MFP.

# **Specifications**

### **Maximum Ratings** at $Ta = 25^{\circ}C$

# Package Dimensions

unit:mm



Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V <sub>CC</sub> max		9	V
Maximum input voltage	V <sub>INB</sub> max		8	V
MUTE pin voltage	VMUTE		8	V
Allowable power dissipation	Pd max		0.9	W
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-55 to +150	°C

# Recommended Operating Conditions at $Ta = 25^{\circ}C$

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	Vcc		5.0	V
Load resistance	RL	Between pins 3 and 4, 12 and 13, 18 and 19, 27 and 28	8.0	Ω

## **Electrical Characteristics** at $Ta = 25^{\circ}C$ , $V_{CC}=5V$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Supply current	ICC	$V_{BIN} = 0.5V$ , Mute is OFF.	25	40	60	mA
		Mute is ON.	5	9	20	mA
BUFF IN1 and BUFF IN2 input voltage	VBIN		1.5	-	V <sub>CC</sub> -1.5	V
Mute ON voltage	VMUTE			0.7		V

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Input voltage for all other inputs	VI		1.0		V <sub>CC</sub> -1.5	V
Output source voltage	V <sub>O1</sub>	See note.	3.4	3.6		V
Output sink voltage	V <sub>O2</sub>	See note.		1.0	1.4	V
$V_01$ to $V_02$ , $V_03$ to $V_04$ , $V_05$ to $V_06$ and $V_07$ to $V_08$ output offset voltage	VOFF		-50		50	mV
BUFF IN1 and BUFF IN2 input bias current	Ι <sub>Β</sub>	$V_{BUFF}$ IN1 = $V_{BUFF}$ IN2 = 0.5 $V_{CC}$ , RI = 100k $\Omega$		100	500	nA
Mute ON current	IMUTE			10		μΑ
Bridge ampliffer closed-loop voltage gain	GV			6		dB
$V_O1$ to $V_O2,V_O3$ to $V_O4,V_O5$ to $V_O6$ and $V_O7$ to $V_O8$ load resistance	RL			8		Ω

#### Note

Output-to-ground voltage when an 8  $\Omega$  load is placed between a pair of bridge amplifier outputs.

# **Pin Assignment**





## **Block Diagram**



## **Sample Application Circuit**



### Note

When VO8 is HIGH, muting is ON and VO1 to VO8 are OFF.

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