



# 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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC}$ max		9	V
Maximum input voltage	$V_{INB}$ max		8	V
MUTE pin voltage	$V_{MUTE}$		8	V
Allowable power dissipation	$P_d$ max		0.9	W
Operating temperature	$T_{opr}$		-20 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	$V_{CC}$		5.0	V
Load resistance	$R_L$	Between pins 3 and 4, 12 and 13, 18 and 19, 27 and 28	8.0	$\Omega$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Supply current	$I_{CC}$	$V_{BIN} = 0.5\text{V}$ , Mute is OFF.	25	40	60	mA
		Mute is ON.	5	9	20	mA
BUFF IN1 and BUFF IN2 input voltage	$V_{BIN}$		1.5	-	$V_{CC}-1.5$	V
Mute ON voltage	$V_{MUTE}$			0.7		V

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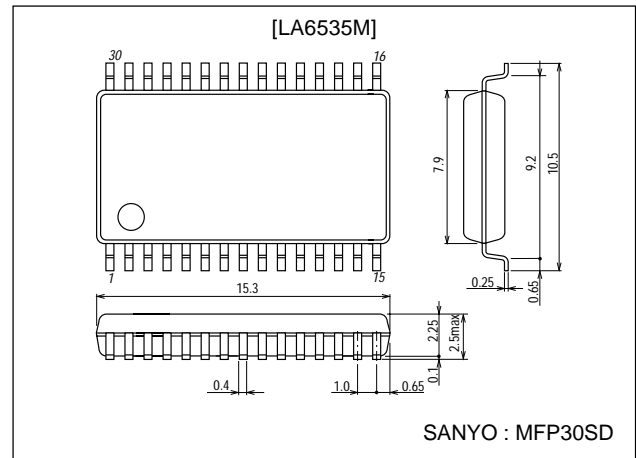
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### Package Dimensions

unit:mm

3073A-MFP30SD



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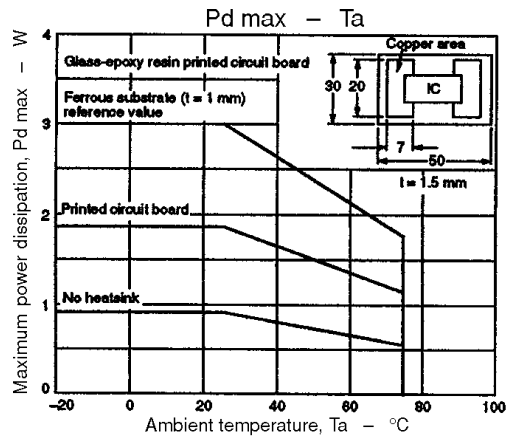
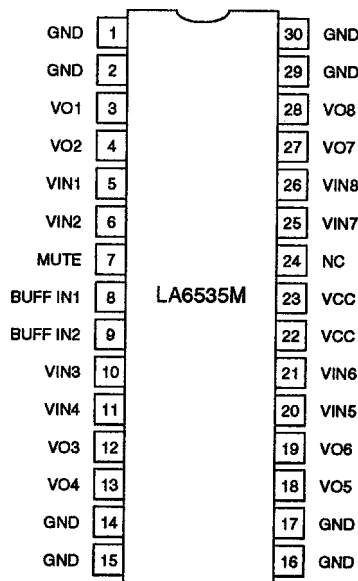
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input voltage for all other inputs	$V_I$		1.0		$V_{CC}-1.5$	V
Output source voltage	$V_{O1}$	See note.	3.4	3.6		V
Output sink voltage	$V_{O2}$	See note.		1.0	1.4	V
$V_{O1}$ to $V_{O2}$ , $V_{O3}$ to $V_{O4}$ , $V_{O5}$ to $V_{O6}$ and $V_{O7}$ to $V_{O8}$ output offset voltage	$V_{OFF}$		-50		50	mV
BUFF IN1 and BUFF IN2 input bias current	$I_B$	$V_{BUFF IN1} = V_{BUFF IN2} = 0.5V_{CC}$ , $R_I = 100k\Omega$		100	500	nA
Mute ON current	$I_{MUTE}$			10		$\mu A$
Bridge amplifier closed-loop voltage gain	$G_V$			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	$R_L$			8		$\Omega$

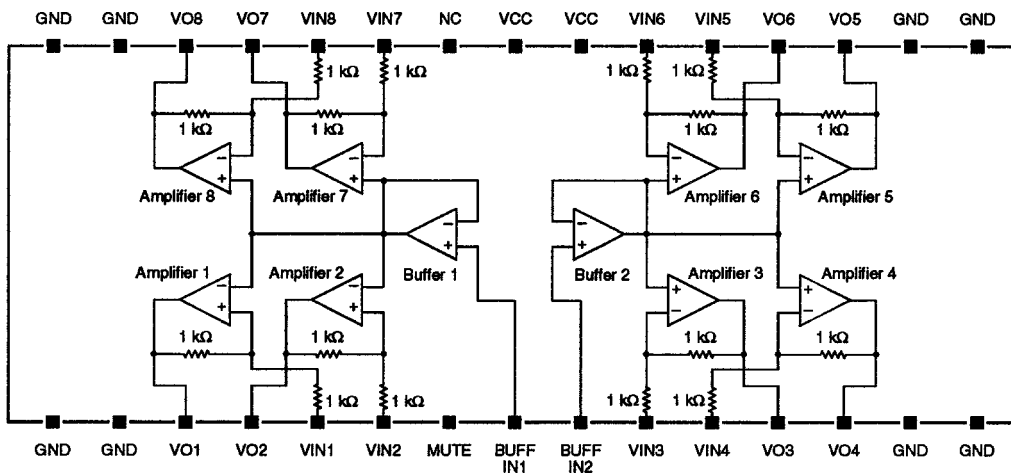
## Note

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

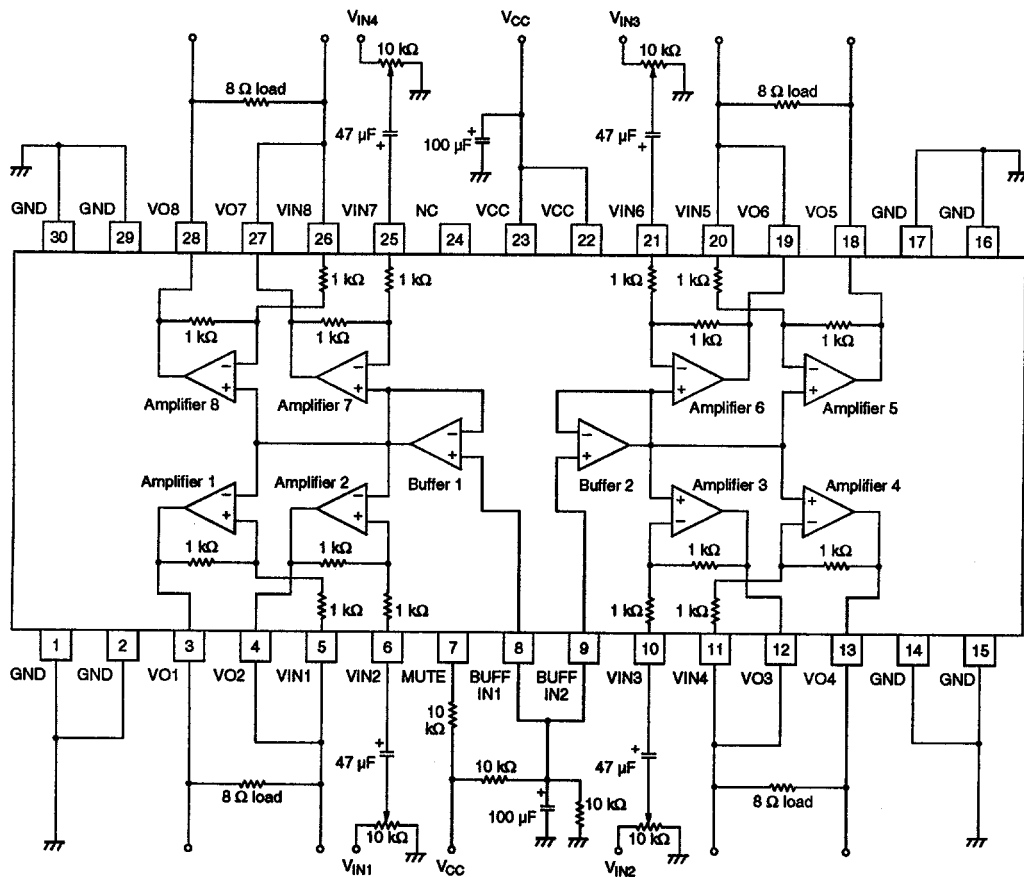
## Pin Assignment



## Block Diagram



## Sample Application Circuit



## Note

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

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