



No.4034

**LA6535M**

**Four-channel Bridge Driver  
for Compact Disc Players**

**OVERVIEW**

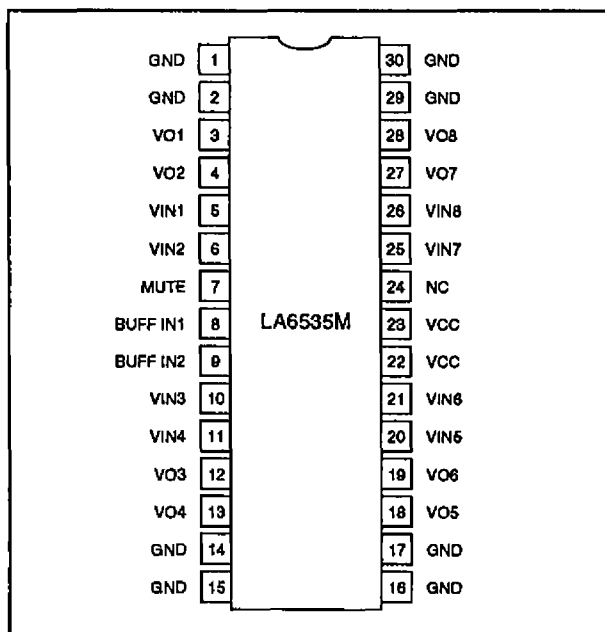
The LA6535M is a four-channel bridge driver IC with output muting. It features 700 mA per channel (max) output current, making it ideal for use in compact disc players.

The LA6535M operates from a 5 V 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
- 5 V supply
- 30-pin MFP

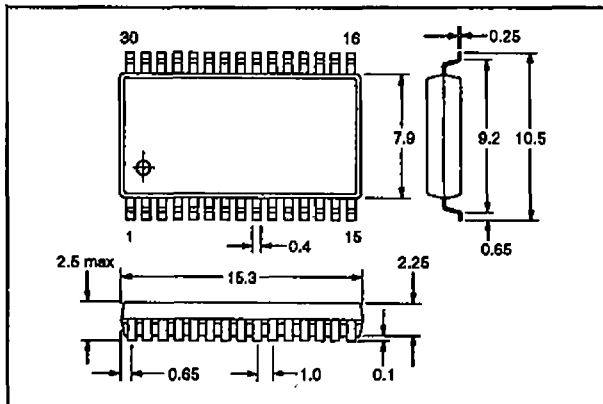
**PINOUT**



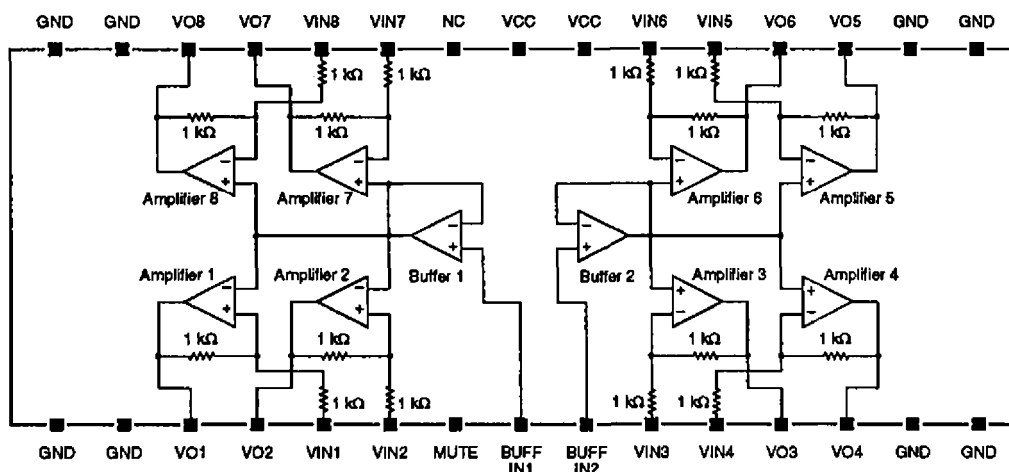
**PACKAGE DIMENSIONS**

Unit: mm

3073A-MFP30S



## BLOCK DIAGRAM



## PIN DESCRIPTION

Number	Name	Description
1, 2, 14 to 17, 29, 30	GND	Ground
3	VO1	Amplifier 1 output
4	VO2	Amplifier 2 output
5	VIN1	Amplifier 1 input
6	VIN2	Amplifier 2 input
7	MUTE	Mute control input
8	BUFF IN1	Buffer 1 input
9	BUFF IN2	Buffer 2 input
10	VIN3	Amplifier 3 input
11	VIN4	Amplifier 4 input
12	VO3	Amplifier 3 output
13	VO4	Amplifier 4 output
18	VO5	Amplifier 5 output
19	VO6	Amplifier 6 output
20	VIN5	Amplifier 5 input
21	VIN6	Amplifier 6 input
22, 23	VCC	5 V supply
24	NC	No connection
25	VIN7	Amplifier 7 input
26	VIN8	Amplifier 8 input
27	VO7	Amplifier 7 output
28	VO8	Amplifier 8 output

## SPECIFICATIONS

### Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	$V_{CC}$	9	V
MUTE input voltage	$V_{MUTE}$	8	V
Input voltage for all other inputs	$V_I$	8	V
Power dissipation	$P_D$	0.9	W
Operating temperature range	$T_{OPR}$	-20 to 75	°C
Storage temperature range	$T_{STG}$	-55 to 150	°C

### Recommended Operating Conditions

$T_a = 25\text{ °C}$

Parameter	Symbol	Rating	Unit
Supply voltage	$V_{CC}$	5	V

### Electrical Characteristics

$V_{CC} = 5\text{ V}$ ,  $T_a = 25\text{ °C}$

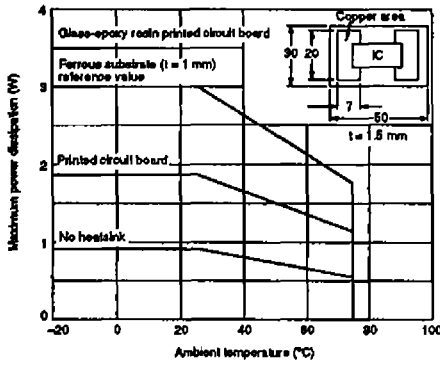
Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Supply current	$I_{CC}$	$V_{BIN} = 0.5\text{ V}$ . Mute is OFF.	25	40	60	mA
		Mute is ON.	5	9	20	
BUFF IN1 and BUFF IN2 input voltage	$V_{BIN}$		1.5	-	$V_{CC} - 1.5$	V
Mute ON voltage	$V_{MUTE}$		-	0.7	-	V
Input voltage for all other inputs	$V_I$		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
VO1 to VO2, VO3 to VO4, VO5 to VO6 and VO7 to VO8 output offset voltage	$V_{OFF}$		-50	-	50	mV
BUFF IN1 and BUFF IN2 input bias current	$I_B$	$V_{BUFF\ IN1} = V_{BUFF\ IN2} = 0.5V_{CC}$ , $R_I = 100\text{ k}\Omega$	-	100	500	nA
Mute ON current	$I_{MUTE}$		-	10	-	$\mu\text{A}$
Bridge amplifier closed-loop voltage gain	$G_V$		-	6	-	dB
VO1 to VO2, VO3 to VO4, VO5 to VO6 and VO7 to VO8 load resistance	$R_L$		-	8	-	$\Omega$

#### Note

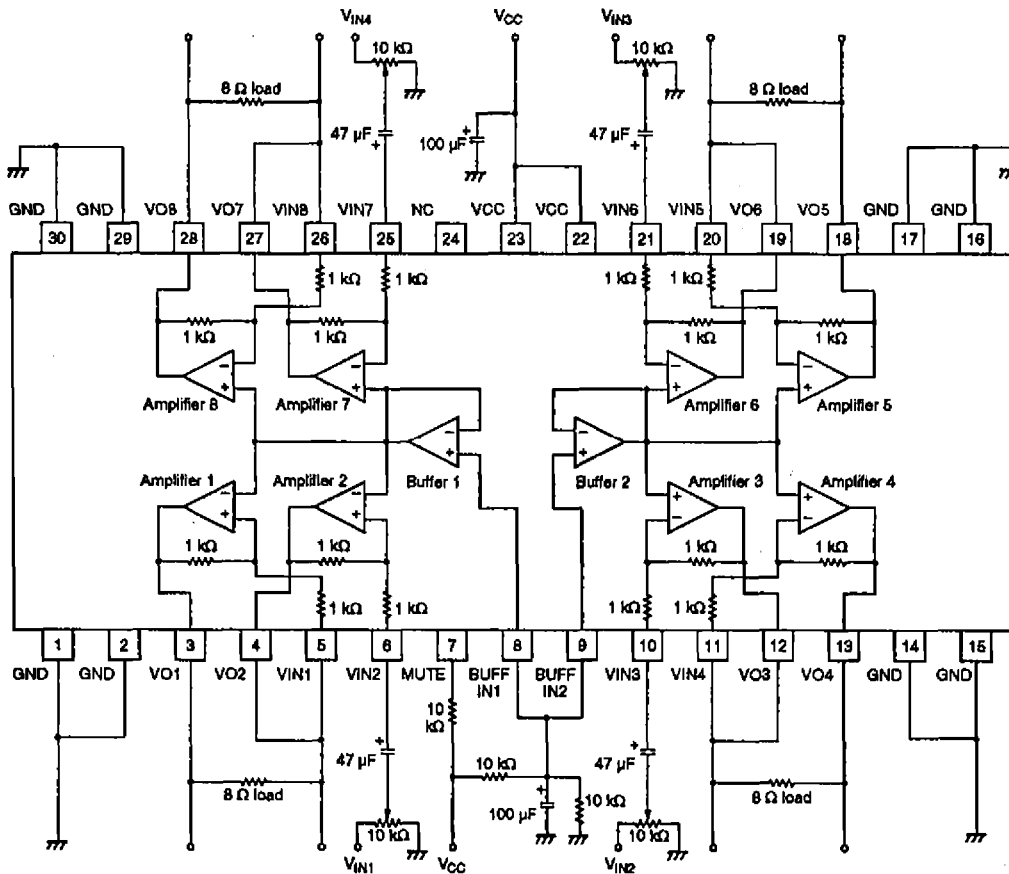
Output-to-ground voltage when an 8  $\Omega$  load is placed between a pair of bridge amplifier outputs.

Typical Performance Characteristics

Maximum power dissipation vs. ambient temperature



TYPICAL APPLICATION



Note

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

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