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| SANYO | No.4034 | LA6535M |
| | Four-channel Bridge Driver for Compact Disc Players | |

OVERVIEW

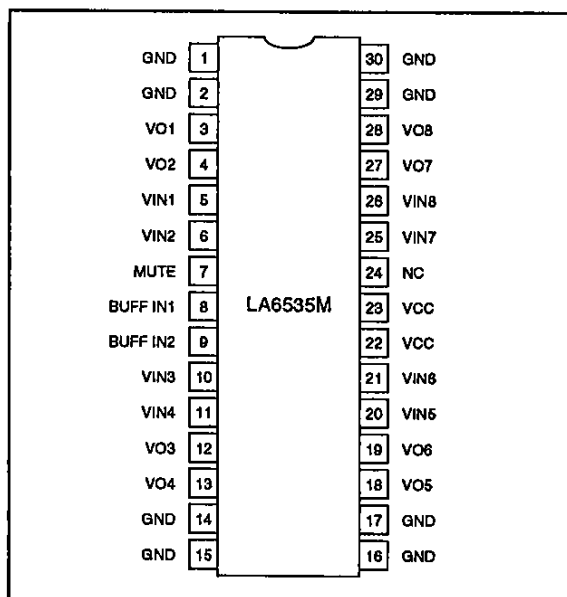
The LA6535M is a four-channel bridge driver IC with output muting. It features 700 mA per channel (max) output current, making it ideal for use in compact disc players.

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

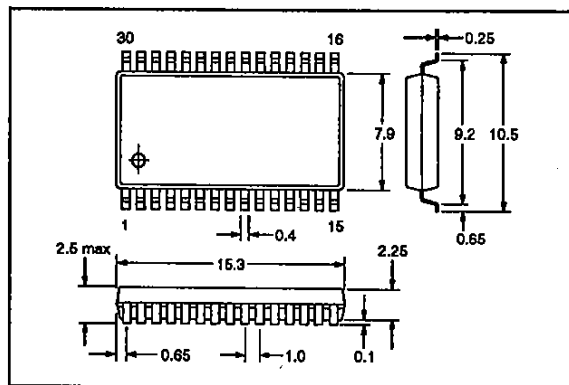
PINOUT



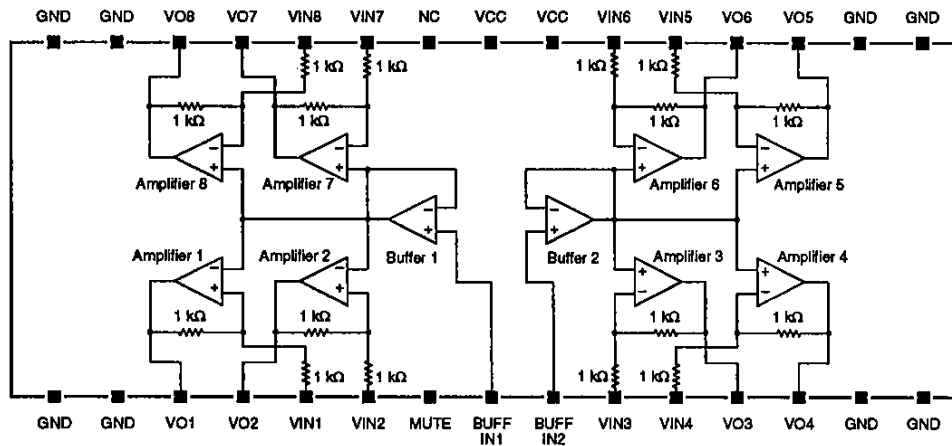
PACKAGE DIMENSIONS

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

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

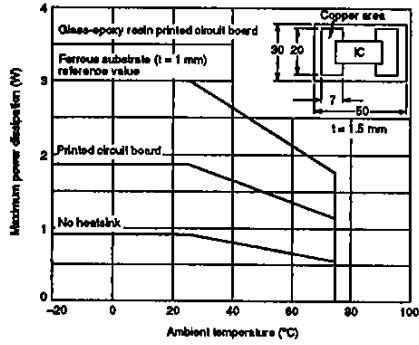
| Parameter | Symbol | Condition | Rating | | | Unit |
|---|------------|--|--------|-----|----------------|---------------|
| | | | min | typ | max | |
| Supply current | I_{CC} | $V_{BIN} = 0.5\text{ V}$, Mute is OFF. | 25 | 40 | 60 | mA |
| | | Mute is ON. | 5 | 9 | 20 | |
| BUFF IN1 and BUFF IN2 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 | - | μA |
| 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 | - | Ω |

Note

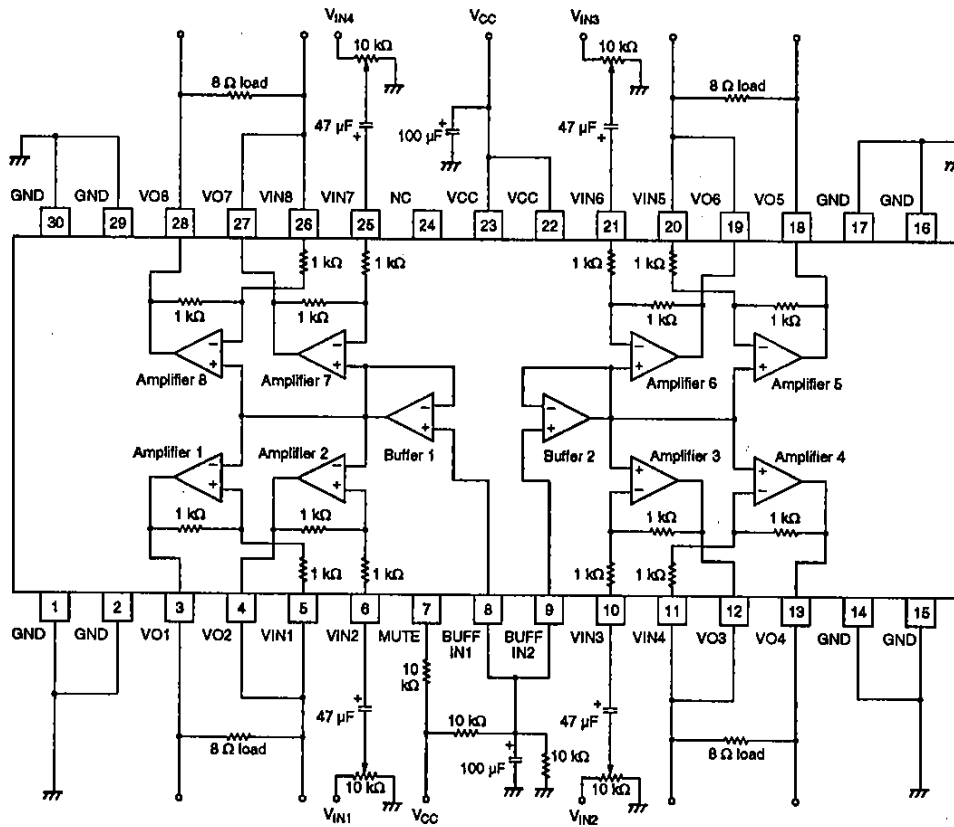
Output-to-ground voltage when an 8 Ω load is placed between a pair of bridge amplifier outputs.

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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