



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°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	°C
Storage temperature	T_{stg}		-55 to +150	°C

Recommended Operating Conditions at Ta = 25°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	Ω

Electrical Characteristics at Ta = 25°C, $V_{CC}=5V$

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

Continued on next page.

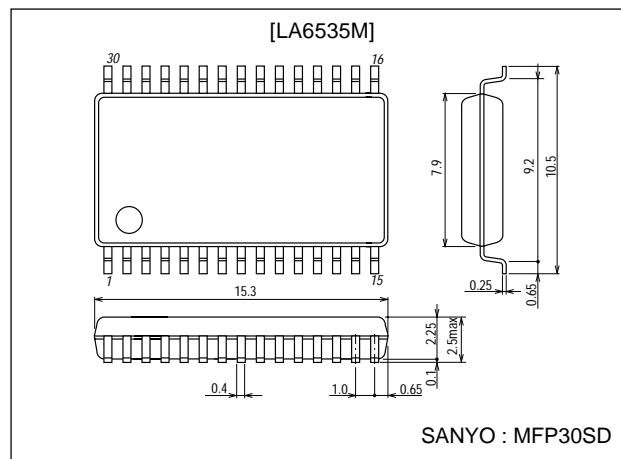
■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

Package Dimensions

unit:mm

3073A-MFP30SD



LA6535M

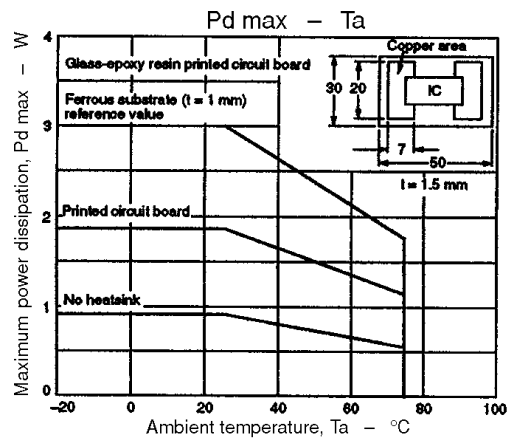
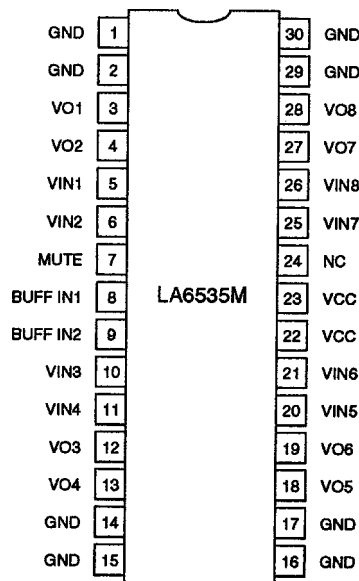
Continued from preceding page.

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		μA
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		Ω

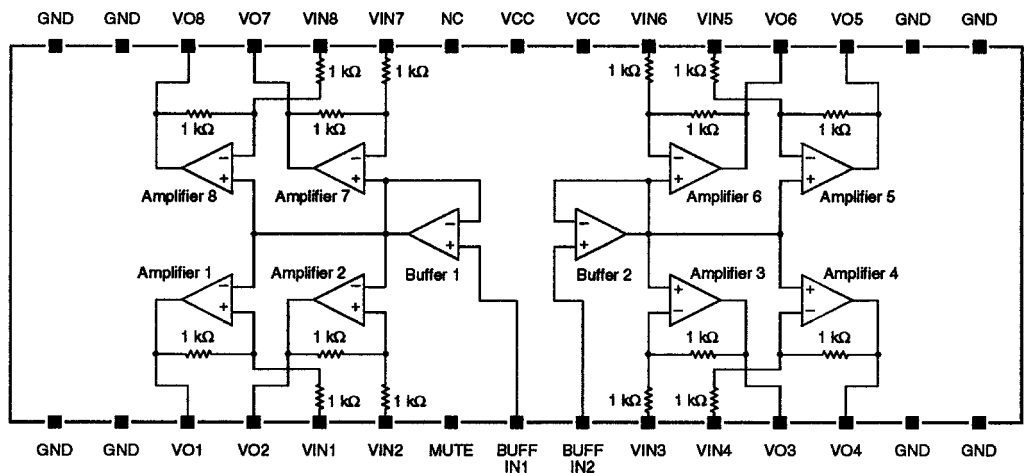
Note

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

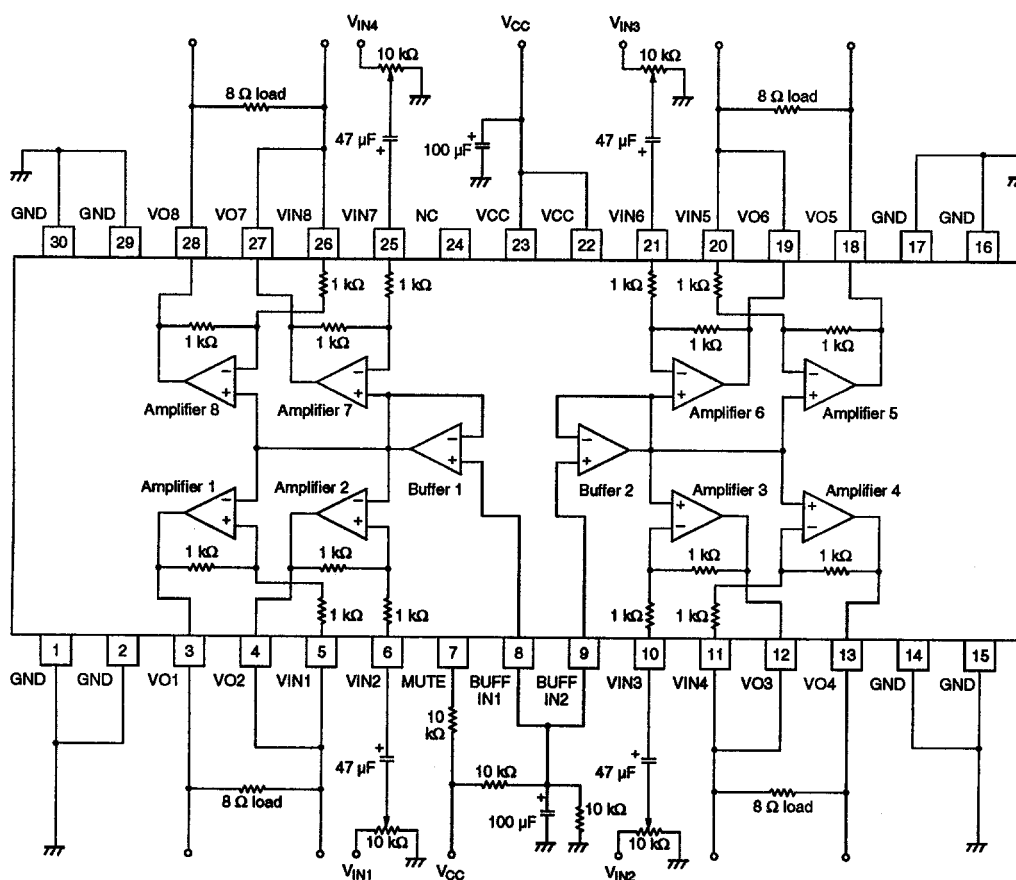
Pin Assignment



Block Diagram



Sample Application Circuit



Note

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

- Specifications of any and all SANYO products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- SANYO Electric Co., Ltd. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all SANYO products (including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of SANYO Electric Co., Ltd.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the SANYO product that you intend to use.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of April, 2000. Specifications and information herein are subject to change without notice.