

LA6532M

4-Channel BTL-Use Driver

Overview

The LA6532M is a 4-channel BTL-use driver designed for compact disc pickup actuation.

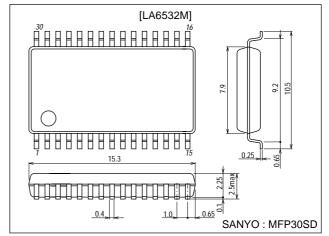
Functions and Features

- BTL-use 4-channel power amplifier.
- I_O max 700mA×2400mA×2 (with voltage limiter).
- With muting function.

Package Dimensions

unit:mm

3073A-MFP30SD



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max		9	V
Allowable power dissipation	Pd max		0.9	W
Differential input voltage	V _{ID}		8	V
Common-mode input voltaget	VICM		8	V
Maximum input voltaget	V _{INB} max	Buffer amplifier	8	V
Muting pin voltage	V _{Mute}		8	V
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-55 to +150	°C

Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	Vcc		5	V
Load resistance	RL	Between pins 3 and 4, 12 and 13, 18 and 19, 27 and 28	8	Ω

Operating Characteristics at Ta = 25°C, $V_{CC}=5.0$ V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Office
No-loaded current drain 1	I _{CC} 1	Note 1	25	40	60	mA
No-loaded current drain 2	I _{CC} 2	Note 2	5	9	20	mA
No-loaded current drain 3	I _{CC} 3	Note 3	25	40	60	mA
No-loaded current drain 4	I _{CC} 4	Note 4	5	9	20	mA

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.

LA6532M

Continued on preceding page.

Parameter	Symbol	Conditions		Ratings		
			min	typ	max	Unit
Output offset voltage 1	V _{OF} 1	Note 5, amplifier 1, 2, 7, 8	-50		+50	mV
Output offset voltage 2	V _{OF} 2	Note 5, amplifier 3, 4, 5, 6	-30		+30	mV
Buffer 1 input-output voltage difference	V _{BIO} 1	Buffer amplifier 1	-30		+30	mV
Buffer 2 input-output voltage difference	V _{BIO} 2	Buffer amplifier 2	0.5	0.6	0.8	V
Amplifier 2 input-output voltage difference	V _{IO} 2	Amplifier 2	0.5	0.6	0.8	V
Amplifier 7 input-output voltage difference	V _{IO} 7	Amplifier 7	0.5	0.6	0.8	V
Input bias current	IB	Note 6		100	500	nA
Buffer input voltage range	VBICM	Buffer amplifier	1.5		V _{CC} -1.5	V
Common-mode input voltage range	VICM		1.0		V _{CC} -1.5	V
Output source voltage	V _O 1	R _L =8.0Ω 700mA amplifier, Note 7	3.4	3.6		V
Output sink voltage	V _O ²	R _L =8.0Ω 700mA amplifier, Note 8		1.0	1.4	V
Output source voltage	V _O 3	R _L =8.0Ω 400mA amplifier, Note 7	2.8	3.4		V
Output sink voltage	V _O 4	R _L =8.0Ω 400mA amplifier, Note 8		1.6	2.2	V
Closed-circuit voltage gain	V _G			6.0		dB
Output limiting voltage	V _{OL}	Amplifier 3, amplifier 6		5.0		V
Muting pin off-state voltage	V _{Mute}			2.2		V
Muting pin off-state current	I _{Mute}			80		Α

Note 1 : Muting OFF. Buffer 22k Ω across $V_{IN^{\!-}}$ and $V_O.$ $V_{IN^{\!+}}$ pin grounded

Note 2 : Muting ON. Buffer 22k Ω across $V_{IN^{\!-}}$ and V_O . $V_{IN^{\!+}}$ pin grounded

Note 3 : Muting OFF. Buffer 22k Ω across $V_{IN^{-}}$ and $V_{O}.$ $V_{IN^{+}}$ pin connected to 1/2 V_{CC}

Note 4 : Muting ON. Buffer 22k Ω across $V_{IN}\text{-}$ and V_O . $V_{IN}\text{+}$ pin connected to $1/2V_{CC}$

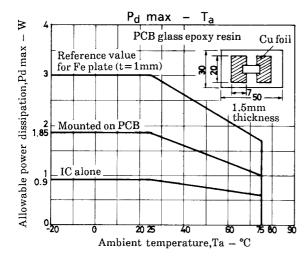
Note 5: For bridge amplifier, represents the difference between outputs.

Note 6 : All V_{IN} connected to $1/2V_{CC}$. $100k\Omega$ connected to the input. Measure the voltage difference. V_{IN} and V_{O} connected through $100k\Omega$. Measure the voltage difference between pins.

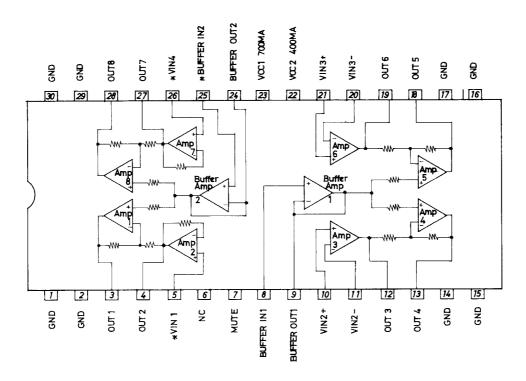
Note 7 : Voltege (source) relative to GND when 8Ω load is connected across outputs of bridge amplifier

Note 8 : Voltege (sink) relative to GND when 8Ω load is connected across outputs of bridge amplifier

* : Be careful in handling the LA6532M, because dielectric breakdown is liable to occur.



Equivalent Circuit Block Diagram



- 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.