Ordering number:ENN3265

Monolithic Linear IC

LA6532M

4-Channel BTL-Use Driver

Overview

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

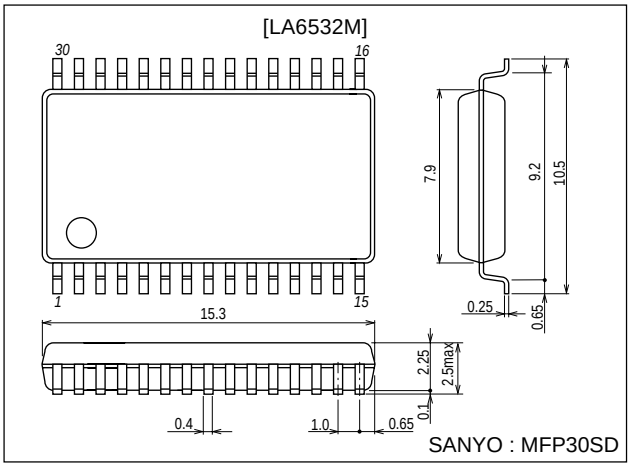
Functions and Features

- 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	V_{ICM}		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	V_{CC}		5	V
Load resistance	R_L	Between pins 3 and 4, 12 and 13, 18 and 19, 27 and 28	8	Ω

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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

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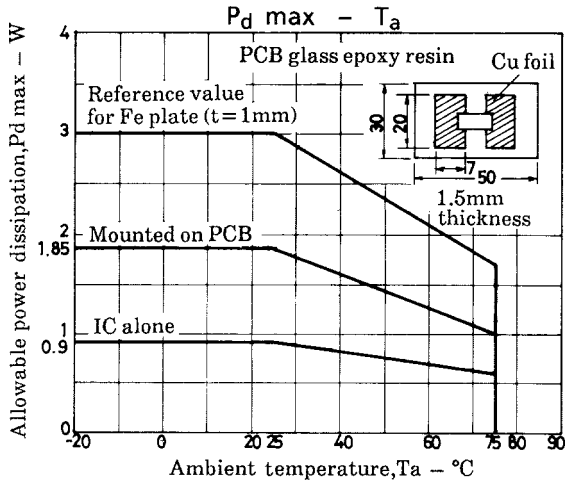
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output offset voltage 1	$V_{OF}1$	Note 5, amplifier 1, 2, 7, 8	–50		+50	mV
Output offset voltage 2	$V_{OF}2$	Note 5, amplifier 3, 4, 5, 6	–30		+30	mV
Buffer 1 input-output voltage difference	$V_{BIO}1$	Buffer amplifier 1	–30		+30	mV
Buffer 2 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	I_B	Note 6		100	500	nA
Buffer input voltage range	V_{BICM}	Buffer amplifier	1.5		V_{CC}–1.5	V
Common-mode input voltage range	V_{ICM}		1.0		V_{CC}–1.5	V
Output source voltage	V_O1	R_L=8.0Ω 700mA amplifier, Note 7	3.4	3.6		V
Output sink voltage	V_O2	R_L=8.0Ω 700mA amplifier, Note 8		1.0	1.4	V
Output source voltage	V_O3	R_L=8.0Ω 400mA amplifier, Note 7	2.8	3.4		V
Output sink voltage	V_O4	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		A

Note 1 : Muting OFF. Buffer 22kΩ across V_{IN}- and V_O. V_{IN}+ pin grounded
Note 2 : Muting ON. Buffer 22kΩ across V_{IN}- and V_O. V_{IN}+ pin grounded
Note 3 : Muting OFF. Buffer 22kΩ across V_{IN}- and V_O. V_{IN}+ pin connected to $1/2V_{CC}$
Note 4 : Muting ON. Buffer 22kΩ across V_{IN}- and V_O. V_{IN}+ pin connected to $1/2V_{CC}$
Note 5 : For bridge amplifier, represents the difference between outputs.
Note 6 : All V_{IN} connected to $1/2V_{CC}$. 100kΩ connected to the input. Measure the voltage difference.
V_{IN} and V_O connected through 100kΩ.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