Monolithic Linear IC



No.3265

**LA6532M** 

4-Channel BTL-Use Driver

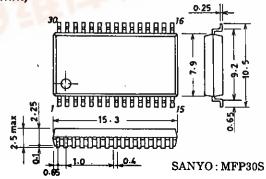
The LA6532M is a 4-channel BTL-use driver designed for compact disc pickup actuation.

## Functions and Features

- · BTL-use 4-channel power amp
- $\cdot$  I<sub>O</sub> max 700mA  $\times$  2400mA  $\times$  2 (with voltage limiter)
- · With muting function

Maximum Ratings at Ta = 25°C				1	unit	
Maximum Supply Voltage	$V_{CC}$ max			9	V	
Allowable Power Dissipation	Pd max		0.	.9	W	
Differential Input Voltage	$V_{\mathrm{ID}}$			8	V	
Common-Mode Input Voltage	$V_{ICM}$			8	V	
Maximum Input Voltage	V <sub>INB</sub> max	Buffer amp		8	V	
Muting Pin Voltage	V <sub>Mute</sub>			8	V	
Operating Temperature	Topr		-20  to  +7	<b>'</b> 5	°C	
Storage Temperature	Tstg		-55  to  +15	0	$^{\circ}\mathrm{C}$	
450 7 FE 1-1- W						
Operating Conditions at $Ta = 25$	°C			1	anit 📉	
Maximum Supply Voltage	$v_{cc}$			5	V	
Load Resistance	$R_L$	Pins 3-4,12-13,18-19,27-28		8	Ω	
Operating Characteristics at $Ta = 25^{\circ}C$ , $V_{CC} = 5.0V$ min typ r						unit
No-Loaded Current Dissipation	1 I <sub>CC</sub> 1	Note 1	25	40	60	mA
No-Loaded Current Dissipation	$I_{CC}$	Note 2	5	9	<b>2</b> 0	mΑ
No-Loaded Current Dissipation	3 I <sub>CC</sub> 3	Note 3	25	40	60	mA
No-Loaded Current Dissipation	$4 I_{CC}4$	Note 4	5	9	20	mΑ
Output Offset Voltage 1	$V_{OF}1$	Note 5 Amp 1-2,7-8	<b> 50</b>		50	mV
Output Offset Voltage 2	$V_{ m OF}2$	Note 5 Amp 3-4,5-6	-30		30	mV
			Continu	ied o	n next	page.

## Package Dimensions 3073A-M30IC (unit: mm)





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Deffer 1 Verset Outside	<b>37</b> 1	D 0° 1	min	typ	max	unit
Buffer 1 Input-Output	ABIOI	Buffer amp 1	-30		30	mV
Voltage Difference						
Buffer 2 Input-Output	$V_{BIO}2$	Buffer amp 2	0.5	0.6	0.8	V
Voltage Difference						-
Amp 2 Input-Output	$V_{IO}2$	Amp 2	0.5	0.6	0.8	V
Voltage Difference						
Amp 7 Input-Output	$V_{IO}7$	Amp 7	0.5	0.6	0.8	V
Voltage Difference						
Input Bias Current	$I_{\mathbf{B}}$	Note 6		100	500	nA
Buffer Input Voltage Range	$V_{BICM}$	Buffer amp	1.5	$V_{\rm CC}$	-1.5	V
Common-Mode Input Voltage Range	$V_{ICM}$		1.0	$V_{CC}$	-1.5	V
Output Source Voltage	$V_{O}1$	$R_L = 8.0\Omega 700 \text{mA amp (Note 7)}$	3.4	3.6		V
Output Sink Voltage	$V_{O}2$	$R_L = 8.0\Omega 700 \text{mA amp (Note 8)}$		1.0	1.4	V
Output Source Voltage	$v_{o3}$	$R_L = 8.0\Omega 400 \text{mA amp (Note 7)}$	2.8	3.4		V
Output Sink Voltage	$V_{O}4$	$R_L = 8.0\Omega 400 \text{mA amp (Note 8)}$		1.6	2.2	V
Closed-Circuit Voltage Gain	$V_{\mathbf{G}}$			6.0		dB
Output Limiting Voltage	$V_{OL}$	Amp 3, amp 6		5.0		V
Muting Pin OFF-State Voltage	$V_{Mute}$			2.2		V
Muting Pin OFF-State Current	I <sub>Mute</sub>			80		À

Note 1 Muting OFF. Buffer  $22k\Omega$  across  $V_{\rm IN-}$  and  $V_{\rm O}.~V_{\rm IN+}$  pin grounded

Note 2 Muting ON. Buffer  $22k\Omega$  across  $V_{IN-}$  and  $V_{O}$ .  $V_{IN+}$  pin grounded

Note 3 Muting OFF. Buffer 22k  $\Omega$  across  $V_{\rm IN-}$  and  $V_{\rm O}$  .  $V_{\rm IN+}$  pin connected to 1/2V  $_{\rm CC}$ 

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

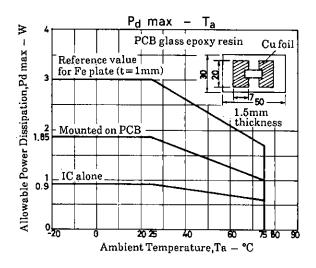
Note 5 For bridge amp, represents the difference between outputs.

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.

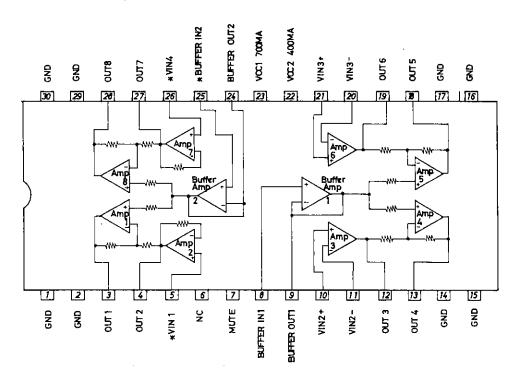
Note 7 Voltage (source) relative to GND when  $8\Omega$  load is connected across outputs of bridge amp

Note 8 Voltage (sink) relative to GND when  $8\Omega$  load is connected across outputs of bridge amp

\* Be carefull in handling the LA6532M, because dielectric breakdown is liable to occur.



## **Equivalent Circuit Block Diagram**



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