



SANYO Semiconductors

## DATA SHEET

# LA6532M

Monolithic Linear IC  
For Compact Disk  
4-Channel BTL-Use Driver

## Overview

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

## Functions

- BTL-use 4-channel power amplifier.
- $I_O$  max  $700\text{mA} \times 2400\text{mA} \times 2$  (with voltage limiter).
- With muting function.

## Specifications

Maximum Ratings at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC}$ max		9	V
Differential input voltage	$V_{ID}$		8	V
Common-mode input voltage	$V_{ICM}$		8	V
Maximum input voltage	$V_{INB}$ max	Buffer amplifier	8	V
Muting pin voltage	$V_{Mute}$		8	V
Allowable power dissipation	$P_d$ max		0.9	W
Operating temperature	$T_{opr}$		-20 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

Operating Conditions at  $T_a = 25^\circ\text{C}$

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	$\Omega$

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60408 MS PC/40500TN (KT)/N019TA, TS No.3265-1/3

# LA6532M

## Electrical Characteristics at $T_a = 25^\circ\text{C}$ , $V_{CC} = 5.0\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
No-loaded current drain 1	$I_{CC1}$	Note 1	25	40	60	mA
No-loaded current drain 2	$I_{CC2}$	Note 2	5	9	20	mA
No-loaded current drain 3	$I_{CC3}$	Note 3	25	40	60	mA
No-loaded current drain 4	$I_{CC4}$	Note 4	5	9	20	mA
Output offset voltage 1	$V_{OF1}$	Note 5, amplifier 1, 2, 7, 8	-50		+50	mV
Output offset voltage 2	$V_{OF2}$	Note 5, amplifier 3, 4, 5, 6	-30		+30	mV
Buffer 1 input-output voltage difference	$V_{BIO1}$	Buffer amplifier 1	-30		+30	mV
Buffer 2 input-output voltage difference	$V_{BIO2}$	Buffer amplifier 2	0.5	0.6	0.8	V
Amplifier 2 input-output voltage difference	$V_{IO2}$	amplifier 2	0.5	0.6	0.8	V
Amplifier 7 input-output voltage difference	$V_{IO7}$	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	$V_{O1}$	$R_L = 8.0\Omega$ 700mA amplifier, Note 7	3.4	3.6		V
Output sink voltage	$V_{O2}$	$R_L = 8.0\Omega$ 700mA amplifier, Note 8		1.0	1.4	V
Output source voltage	$V_{O3}$	$R_L = 8.0\Omega$ 400mA amplifier, Note 7	2.8	3.4		V
Output sink voltage	$V_{O4}$	$R_L = 8.0\Omega$ 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 22k $\Omega$  across  $V_{IN}^-$  and  $V_O$ .  $V_{IN}^+$  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  $V_{IN}^-$  and  $V_O$ .  $V_{IN}^+$  pin connected to  $1/2V_{CC}$

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 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 : Voltage (source) relative to GND when 8 $\Omega$  load is connected across outputs of bridge amplifier

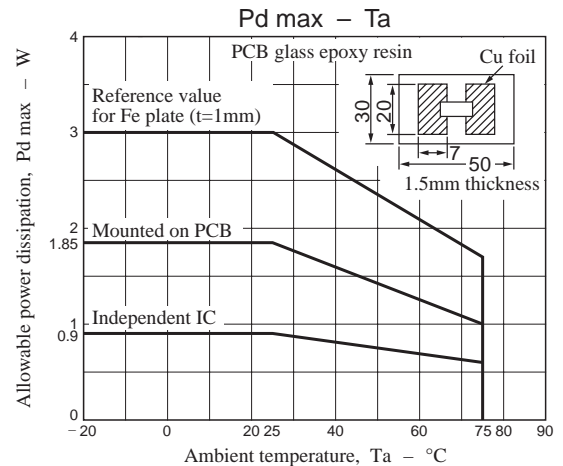
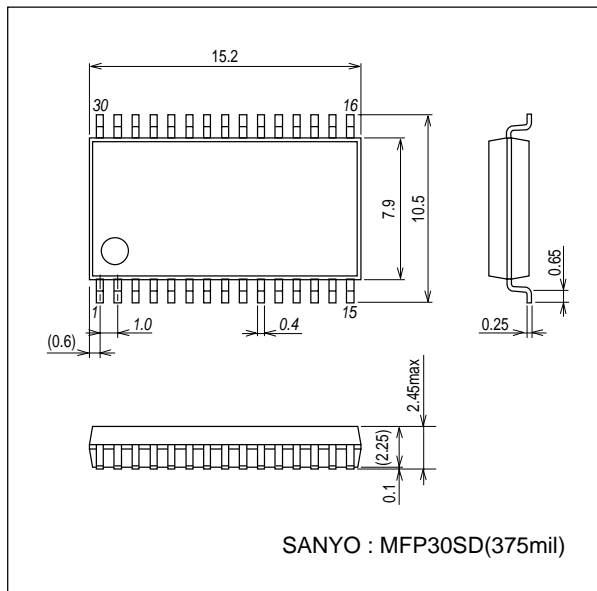
Note 8 : Voltage (sink) relative to GND when 8 $\Omega$  load is connected across outputs of bridge amplifier

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

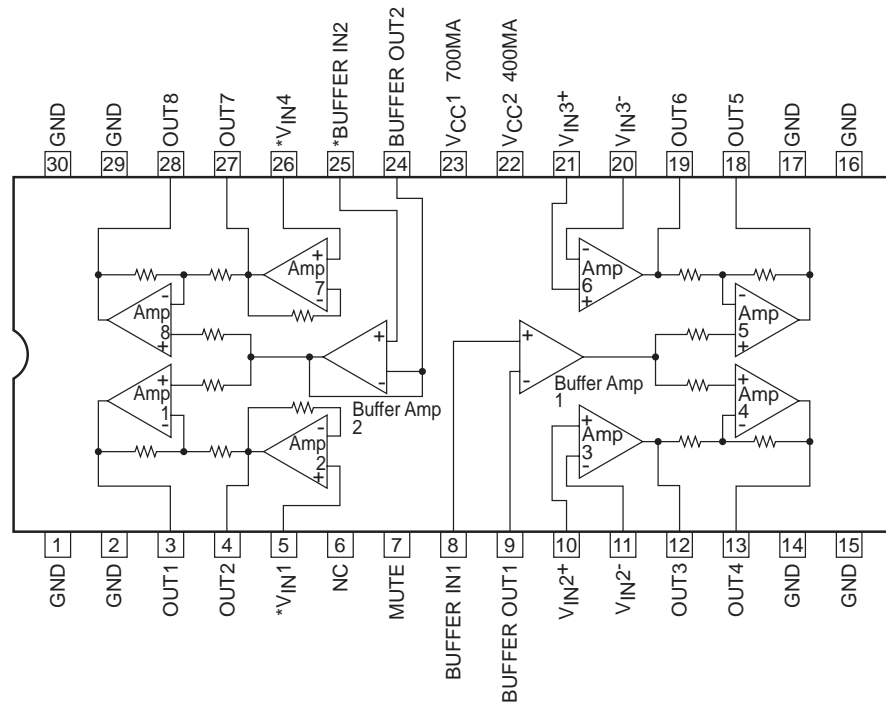
## Package Dimensions

unit : mm (typ)

3073C



## Block Diagram



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