

## Заработай на бирже без вложений!

[finam.ru](https://finam.ru) >

Финансовые услуги оказывает: ООО «ФИНАМ ФОРЕКС»



TDA2320A

STEREO AMPLIFIER

- WIDE SUPPLY VOLTAGE RANGE: 3 TO 30V
- SINGLE OR SPLIT SUPPLY OPERATION
- VERY LOW CURRENT CONSUMPTION:  
0.8mA
- VERY LOW DISTORTION: 0.03% TYPICAL

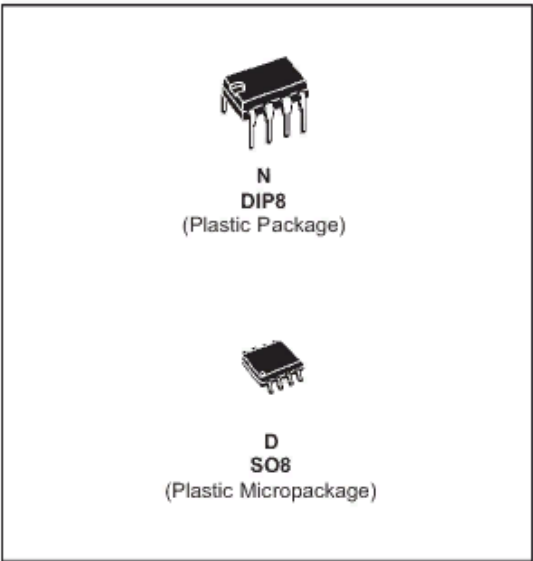
DESCRIPTION

The TDA2320A is a stereo class A preamplifier intended for application in portable cassette players and high quality audio systems.  
The TDA2320A is a monolithic integrated circuit in a 8 lead plastic dip.

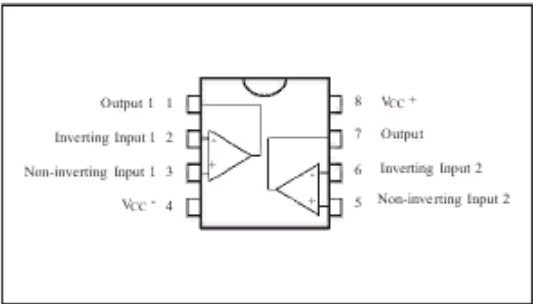
ORDER CODE

Part Number	Temperature Range	Package	
		N	D
TDA2320A	-40°C, +105°C	•	•
Example : TDA2320AN			

N = Dual In Line Package (DIP)

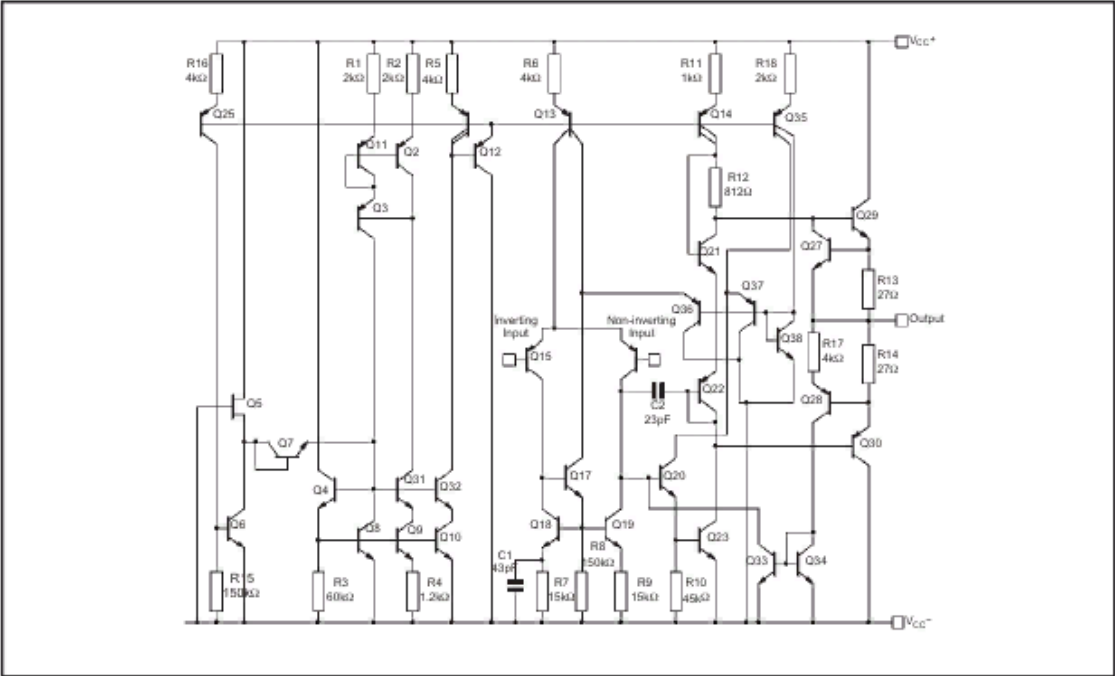


PIN CONNECTIONS (top view)



TDA2320A

SCHEMATIC DIAGRAM (1/2 TDA2320A)



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_{CC}$	Supply Voltage	36	V
$P_{tot}$	Total Power Dissipation at $T_{amb} = 70^{\circ}C$ <sup>1)</sup>	400	mW
$T_{stg}, T_j$	Storage and Junction Temperature	-40 to 150	$^{\circ}C$

1. Power dissipation must be considered to ensure maximum junction temperature ( $T_j$ ) is not exceeded.



## TDA2320A

## ELECTRICAL CHARACTERISTICS

 $V_{CC} = 15V$ ,  $T_{amb} = 25^{\circ}C$  (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
$V_{CC}$	Supply Voltage	3		30	V
$I_{CC}$	Supply Current		0.8	2	mA
$I_{ib}$	Input Bias Current		150	500	mV
$V_{io}$	Input Offset Voltage $R_s \leq 10k\Omega$		1	5	mV
$I_{io}$	Input Offset Current		10	50	nA
$A_{vd}$	Open Loop Voltage Gain $V_{CC} = 15V$ $f = 333Hz$ $f = 1kHz$ $f = 10kHz$ $f = 1kHz$		80 70 50 70		dB
$V_{opp}$	Output Voltage Swing ( $f = 1kHz$ , $R_L = 600\Omega$ ) $V_{CC} = 15V$ $V_{CC} = 4.5V$		13 2.5		V
GBP	Gain-bandwidth Product $f = 200kHz$	1.5	2.5		MHz
FPB	Power Bandwidth $V_o = 5V_{pp}$ , THD = 1%	40	70		kHz
SR	Slew Rate (see note 1)	1	1.6		V/ $\mu s$
$e_n$	Equivalent Input Noise Voltage Curve A $R_s = 50\Omega$ $R_s = 600\Omega$ $R_s = 5k\Omega$ $B = 22Hz$ to $22kHz$ $R_s = 50\Omega$ $R_s = 600\Omega$ $R_s = 5k\Omega$ $f = 1kHz$ $R_s = 600\Omega$		1 1.1 1.5 1.3 1.5 2 9		$\mu V$ $\mu V$ $\mu V$ $\mu V$ $\mu V$ $\mu V$ $\mu V$ $nV/\sqrt{Hz}$
THD	Distortion ( $V_o = 2V$ , $A_v = 20dB$ ) $f = 1kHz$ $f = 10kHz$		0.03 0.08		%
PSRR	Power Supply Rejection Ratio $f = 100Hz$		80		dB
$V_{o1}/V_{o2}$	Channel Separation $f = 1kHz$		100		dB

TDA2320A

Figure 1 : Supply Current versus Supply Voltage

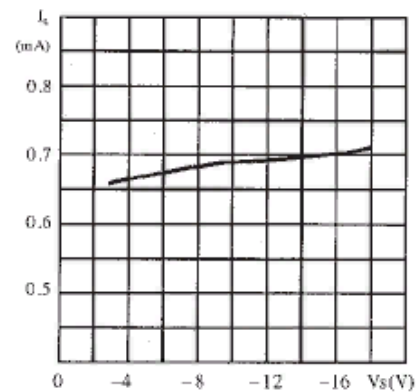


Figure 2 : Supply Current versus Ambient Temperature

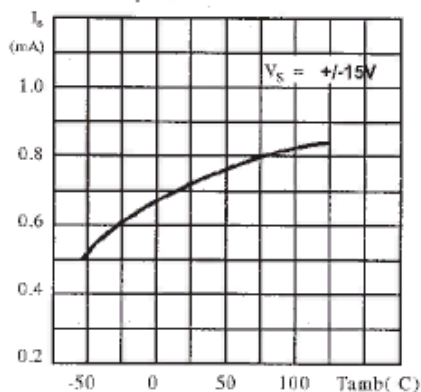


Figure 3 : Output Short Circuit Current versus Ambient Temperature

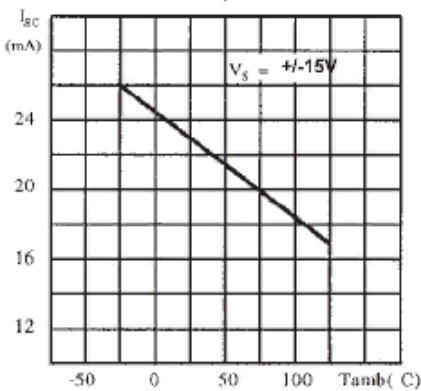


Figure 4 : Open Loop Frequency and Phase Response

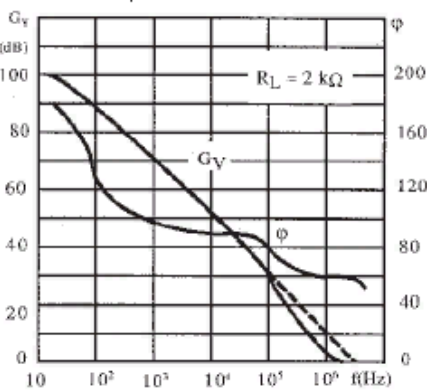


Figure 5 : Output Loop Gain versus Ambient Temperature

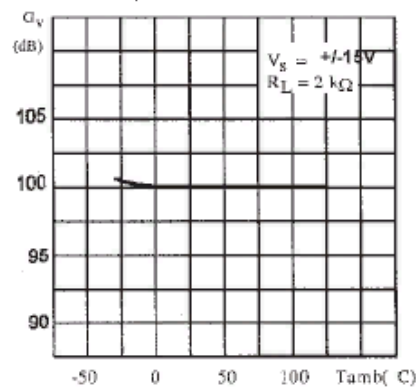


Figure 6 : Supply Voltage Rejection versus Frequency

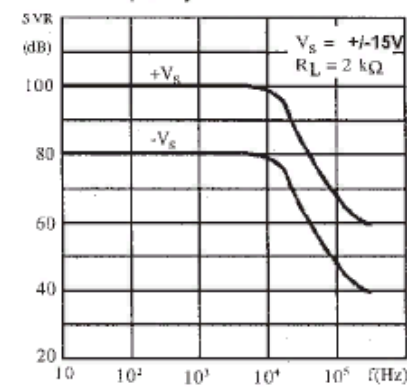


Figure 7 : Large Signal Frequency Response

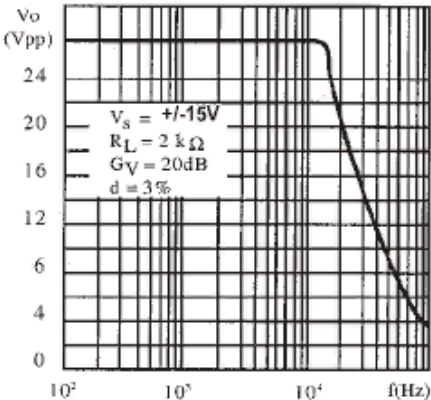


Figure 8 : Output Voltage Swing versus Load Resistance

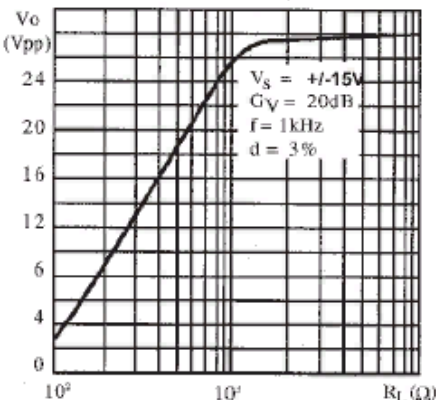


Figure 9 : Total Input Noise versus Frequency

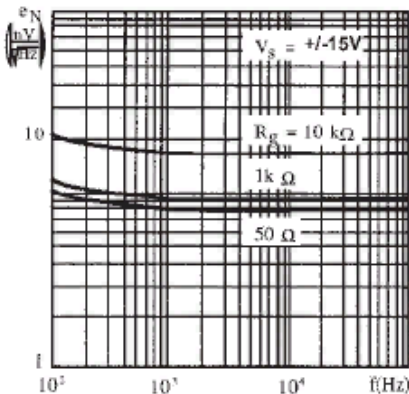


Figure 10 : Amplitude Response

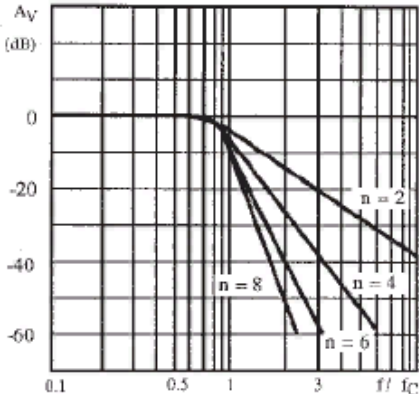
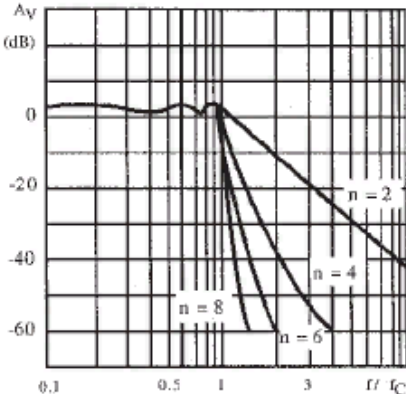


Figure 11 : Amplitude Response ( ±1dB ripple)



TDA2320A

Figure 12 : Filter Configuration

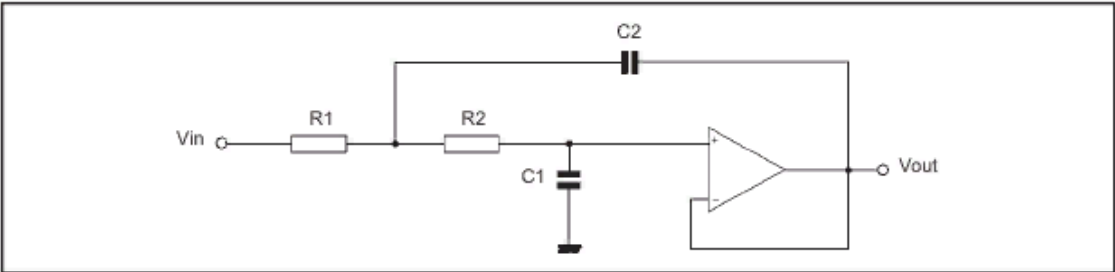


Figure 13 : 5th Order Low-pass Filter (Butterworth) with Unity Gain configuration

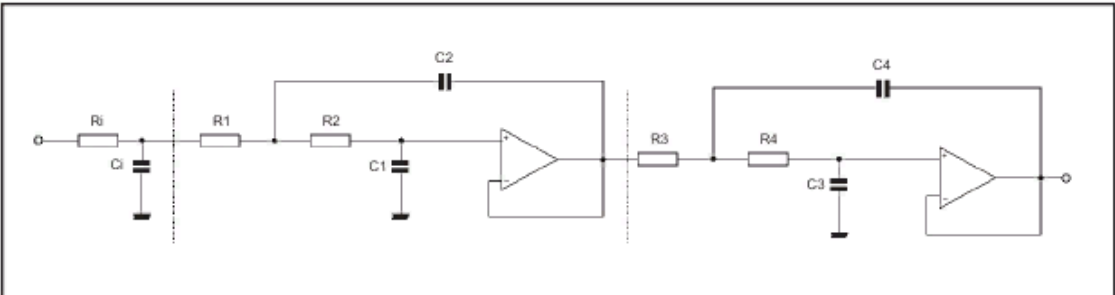
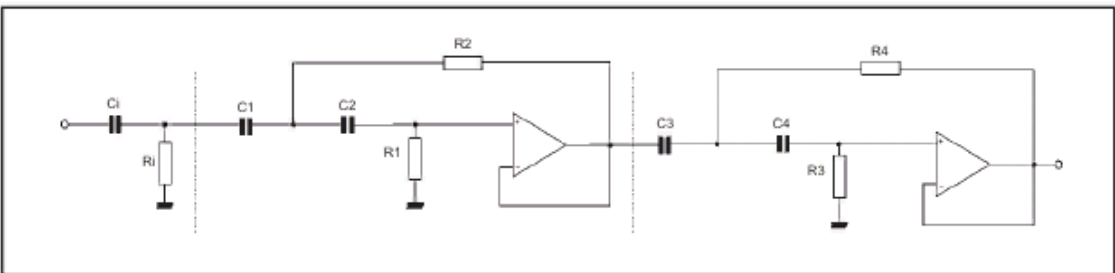
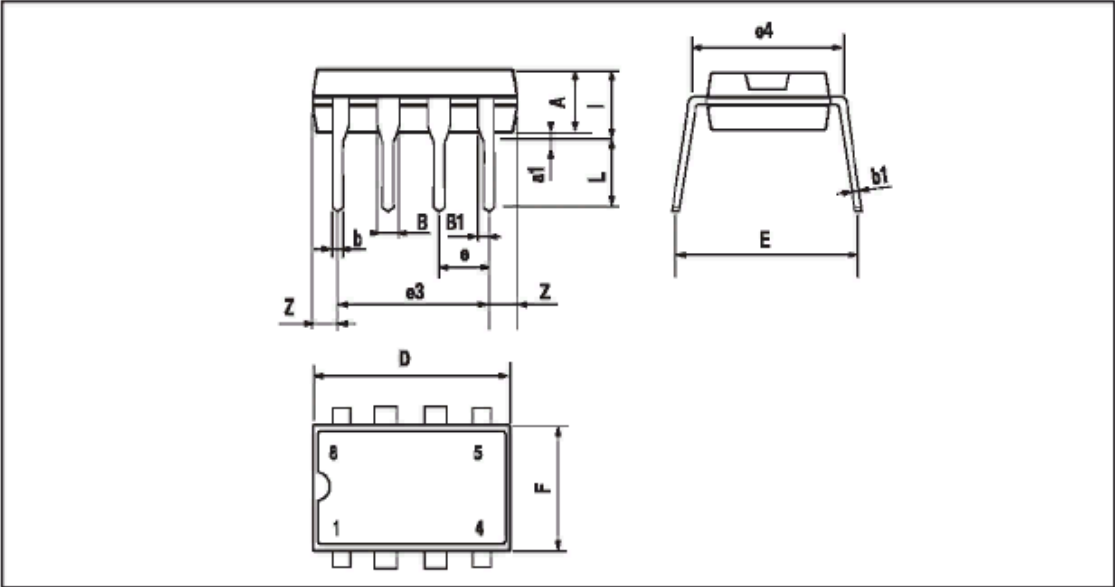


Figure 14 : 5th Order High-pass Filter (Butterworth) with Unity Gain configuration



TDA2320A

PACKAGE MECHANICAL DATA  
8 PINS - PLASTIC DIP



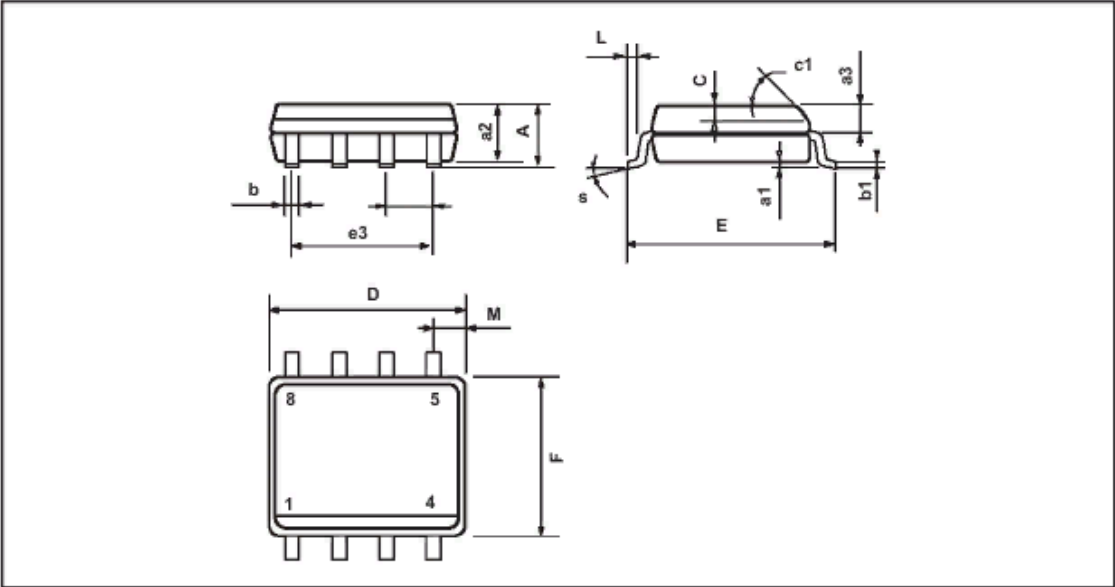
Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		3.32			0.131	
a1	0.51			0.020		
B	1.15		1.65	0.045		0.065
b	0.356		0.55	0.014		0.022
b1	0.204		0.304	0.008		0.012
D			10.92			0.430
E	7.95		9.75	0.313		0.384
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			6.6			0.260
i			5.08			0.200
L	3.18		3.81	0.125		0.150
Z			1.52			0.060





TDA2320A

PACKAGE MECHANICAL DATA  
8 PINS - PLASTIC MICROPACKAGE (SO)



Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.75			0.069
a1	0.1		0.25	0.004		0.010
a2			1.65			0.065
a3	0.65		0.85	0.026		0.033
b	0.35		0.48	0.014		0.019
b1	0.19		0.25	0.007		0.010
C	0.25		0.5	0.010		0.020
c1	45° (typ.)					
D	4.8		5.0	0.189		0.197
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		3.81			0.150	
F	3.8		4.0	0.150		0.157
L	0.4		1.27	0.016		0.050
M			0.6			0.024
S	8° (max.)					

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a registered trademark of STMicroelectronics

2001 STMicroelectronics - Printed in Italy - All Rights Reserved  
STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia  
Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States  
<http://www.st.com>

