HT82V732
60mA Audio Power Amp

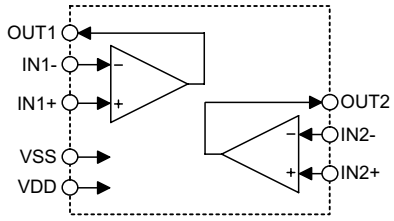
Features

- Single power supply voltage: 5V
- Low power consumption
- Low distortion
- Low clock Jitter sensitivity
- High SNR ratio range
- Wide temperature range
- 8-pin SOP package

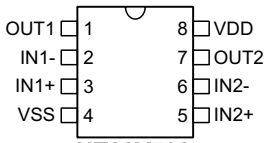
General Description

HT82V732 is a class AB stereo earphone driver designed for portable digital audio application. It provides 8-SOP package. Pin assignments and application circuit is compatible with TDA1308 which is suitable for effective low cost applications. HT82V732 is ideal for portable digital audio equipment, CD ROM/DVD ROM and DISCMAN system.

Block Diagram



Pin Assignment



HT82V732
– 8 SOP-A

Pin Description

Pin No.	Pin Name	I/O	Description
1	OUT1	O	Output
2	IN1–	I	Inverting input
3	IN1+	I	Non-inverting input
4	VSS	—	Negative power supply, ground
5	IN2+	I	Non-inverting input
6	IN2–	I	Inverting input
7	OUT2	O	Output
8	VDD	—	Positive power supply

Electrical Characteristics

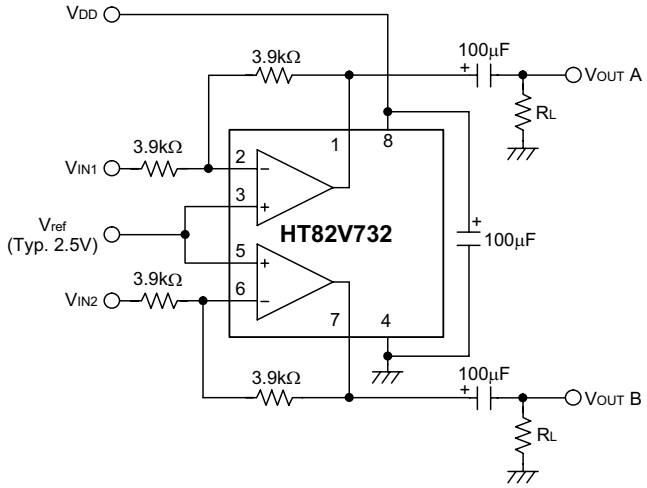
V_{SS}=0V; f_i=1kHz; R_L=32Ω

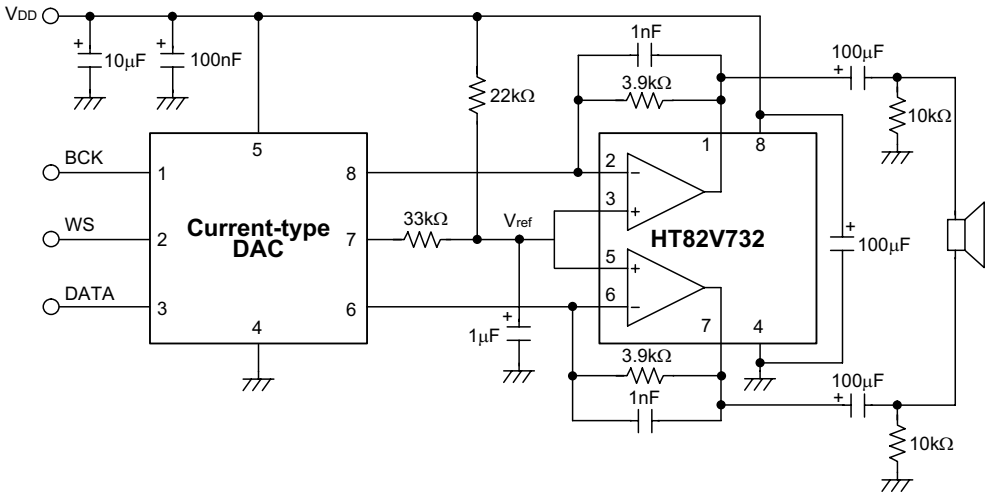
Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
		V_{DD}	Conditions				
Supplies							
V_{DD}	Supply Voltage	5V	—	—	—	—	V
	Single			3.0	5.0	6.0	
	Dual			1.5	2.5	3	
V_{SS}	Negative Supply Voltage	5V	—	–1.5	–2.5	–3	V
I_{DD}	Supply Current	5V	No load	—	3	5	mA
P_{tot}	Total Power Dissipation	5V	No load	—	15	25	mW
DC Characteristics							
$V_{I(OS)}$	Input Offset Voltage	5V	—	—	10	—	mV
I_{bias}	Input Bias Current	5V	—	—	10	—	pA
V_{CM}	Common Mode Voltage	5V	—	0	—	3.5	V
G_V	Open-loop Voltage Gain	5V	R_L=5kΩ	—	70	—	dB
I_O	Maximum Output Current	5V	(THD+N)/S<0.1%	—	60	—	mA
R_O	Output Resistance	5V	—	—	0.25	—	Ω
V_O	Output Voltage swing	5V	R_L=32Ω *	0.75	—	4.25	V
			R_L=16Ω *	1.5	—	3.5	
			R_L=5kΩ *	0.1	—	4.9	
PSRR	Power Supply Rejection Ratio	5V	F_i=100Hz; $V_{ripple(p-p)}$=100mV	—	90	—	dB
α_{CS}	Channel Separation	5V	—	—	70	—	dB
C_L	Load Capacitance	5V	—	—	—	200	pF
AC Characteristics							
(THD+N)/S	Total Harmonic Distortion Plus Noise-to-signal Ratio	5V	$V_{O(P-P)}$=3.5V **	—	–70	—	dB
				—	0.03	—	%
S/N	Signal-to-noise Ratio	5V	—	—	100	—	dB
f_G	Unity Gain Frequency	5V	Open-loop; R_L=5kΩ	—	5.5	—	MHz
P_O	Maximum Output Power	5V	(THD+N)/S<0.1%	—	60	—	mW
C_i	Input Capacitance	5V	—	—	3	—	pF
SR	Slew Rate	5V	Unity gain inverting	—	5	—	V/μs
B	Power Bandwidth	5V	Unity gain inverting	—	20	—	kHz

Note: "*" Values are proportional to V_{DD}; (THD+N)/S<0.1%

"**" V_{DD}=5V, $V_{O(P-P)}$=3.5V (at odB)

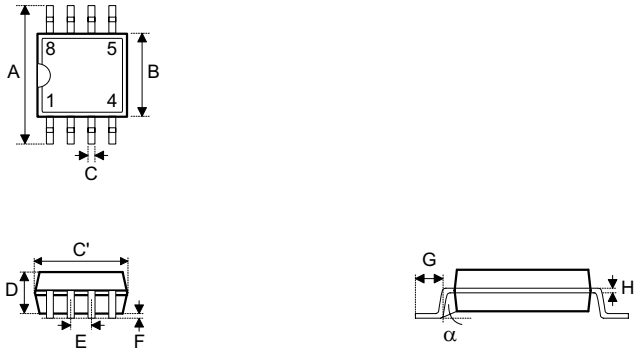
Application Circuits





Package Information

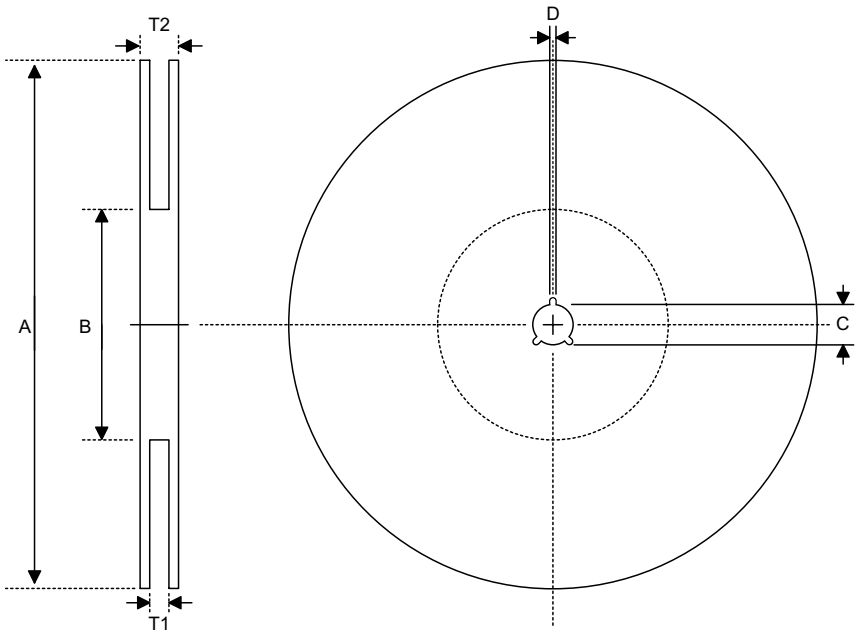
8-pin SOP (150mil) outline dimensions



Symbol	Dimensions in mil		
	Min.	Nom.	Max.
A	228	—	244
B	149	—	157
C	14	—	20
C′	189	—	197
D	53	—	69
E	—	50	—
F	4	—	10
G	22	—	28
H	4	—	12
α	0°	—	10°

Product Tape and Reel Specifications

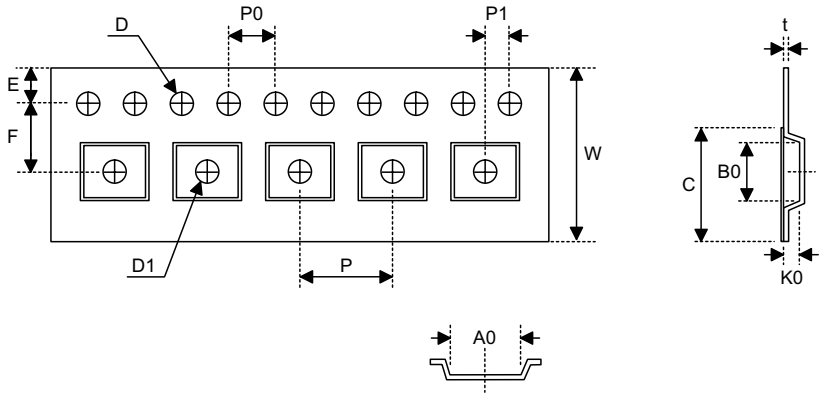
Reel dimensions



SOP 8N

Symbol	Description	Dimensions in mm
A	Reel Outer Diameter	330±1.0
B	Reel Inner Diameter	62±1.5
C	Spindle Hole Diameter	13.0+0.5 −0.2
D	Key Slit Width	2.0±0.15
T1	Space Between Flange	12.8+0.3 −0.2
T2	Reel Thickness	18.2±0.2

Carrier tape dimensions



SOP 8N

Symbol	Description	Dimensions in mm
W	Carrier Tape Width	12.0+0.3 −0.1
P	Cavity Pitch	8.0±0.1
E	Perforation Position	1.75±0.1
F	Cavity to Perforation (Width Direction)	5.5±0.1
D	Perforation Diameter	1.55±0.1
D1	Cavity Hole Diameter	1.5+0.25
P0	Perforation Pitch	4.0±0.1
P1	Cavity to Perforation (Length Direction)	2.0±0.1
A0	Cavity Length	6.4±0.1
B0	Cavity Width	5.20±0.1
K0	Cavity Depth	2.1±0.1
t	Carrier Tape Thickness	0.3±0.05
C	Cover Tape Width	9.3

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