

DUAL CHANNEL POWER AMPLIFIER——YD2822A

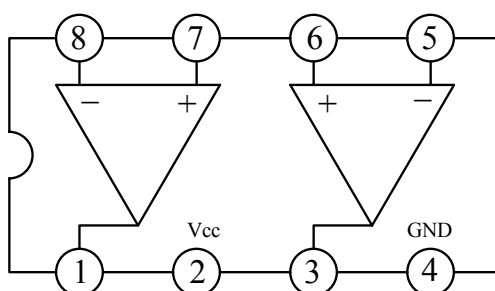
DESCRIPTION

The YD2822A is a monolithic integrated audio amplifier in a 8-pin plastic dual in line package. It is designed for mini cassette players and radios.

FEATURES

- *Wide operating supply voltage : $V_{CC}=1.8V\sim 5V$
- *Low crossover distortion
- *Low quiescent circuit current
- *Bridge/stereo configuration

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS (Tamb=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	6	V
Output Peak Current	Iop	500	mA
Power Dissipation	P _D	600	mW
Operating Temperature	Topr	-20~+ 70	°C
Storage Temperature	Tstg	-40~+150	°C

ELECTRICAL CHARACTERISTICS

(V_{cc}=3.0V, T_{amb}=25°C, all voltage referenced to GND, Unless otherwise specified)

STEREO APPLICATION

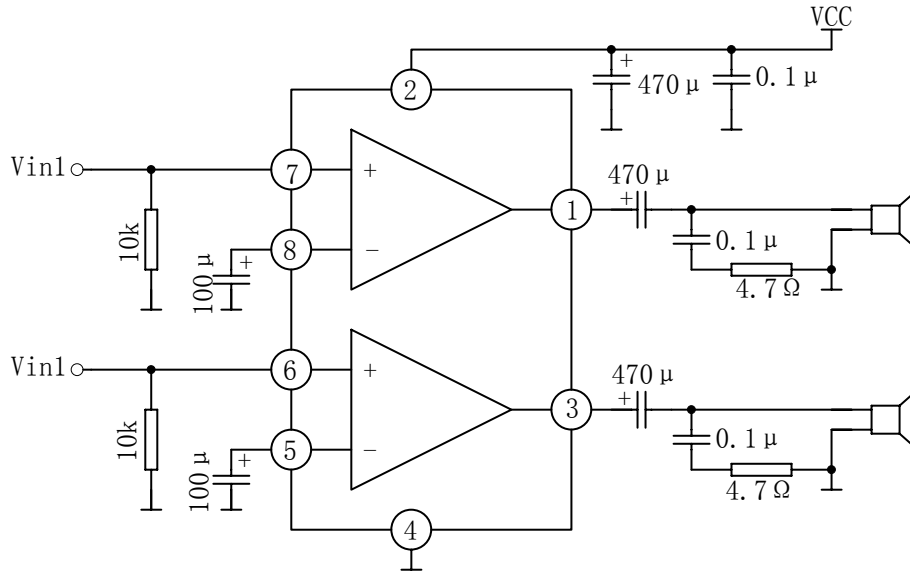
PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Operating Supply Voltage	V _{CC}			1.8		5	V
Quiescent Circuit Current	I _{ccq}				6	9	mA
Output Power	P _O	f=1kHz THD=10 %	V _{CC} =4.5V, R _L =32Ω	45	60		mW
			V _{CC} =3V, R _L =8Ω	45	60		
			V _{CC} =3V, R _L =4Ω	90	100		
Total Harmonic Distortion	THD	R _L =32Ω, P _O =30mW			0.2	1.0	%
		R _L =8Ω, P _O =30mW			0.2	1.0	
		R _L =4Ω, P _O =50mW			0.2	1.0	
Closed Loop Voltage Gain	G _V	f=1kHz		37	39	41	dB
Channel Balance	Δ G _V					±1	dB
Input Resistance	Z _i	f=1kHz		100			k Ω
Input Noise Voltage	V _{NI}	R _g =10k Ω BPF=20Hz~20kHz			2.5		μ V
Ripple Rejection	RR	f=100Hz		24	30		dB
Cross Talk	CT	f=1kHz			30		dB

BTL APPLICATION

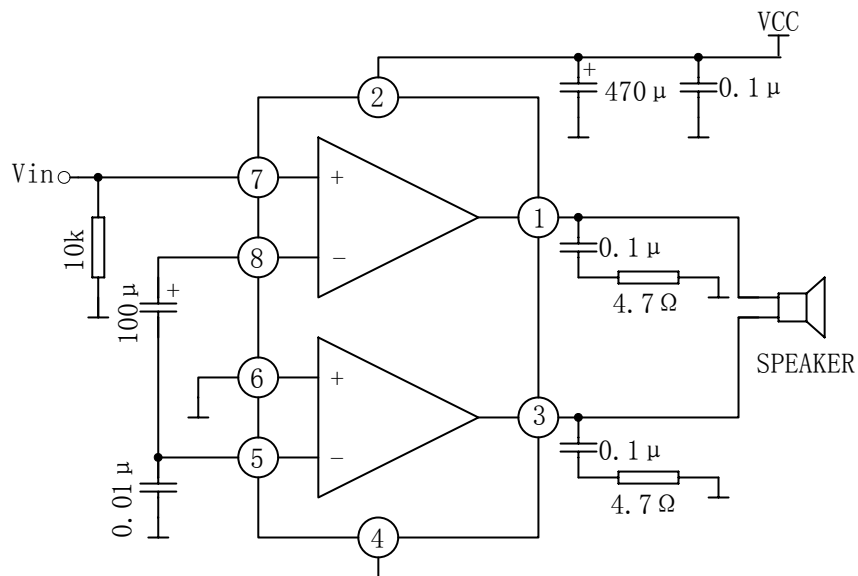
PARAMETER	SYMBOL	TEST CONDITIONS	NIN	TYP	MAX	UNIT
Operating Supply Voltage	V_{CC}		1.8		5.0	V
Quiescent Circuit Current	I_{ccq}	$R_L = \infty$		6	9	mA
DC Output Balance	ΔV_O	$R_L = 8 \Omega$			± 50	mV
Output Power	P_o	$f=1\text{kHz}$ $\text{THD}=10\%$	$R_L=16 \Omega$	100	110	mW
			$R_L=8 \Omega$	190	200	mW
Total Harmonic Distortion	THD	$P_o=0.1\text{W}, R_L=8 \Omega, f=1\text{kHz}$		0.5	1.0	%
Closed Loop Voltage Gain	G_V	$f=1\text{kHz}$	37	39	41	dB
Input Resistance	Z_i	$f=1\text{kHz}$	100			k Ω
Input Noise Voltage	V_{N1}	$R_g=10\text{k} \Omega$ $\text{BPF}=20\text{Hz} \sim 20\text{kHz}$		3		μV
Ripple Rejection	RR	$f=100\text{Hz}$		40		dB
Power Bandwidth	BW	$R_L=8 \Omega, P_o=0.1\text{W}$		30		kHz

APPLICATION CIRCUIT

(1) YD2822A STEREO APPLICATION



(2) YD2822A BTL APPLICATION



OUTLINE DRAWING

DIP-8

unit:mm

