

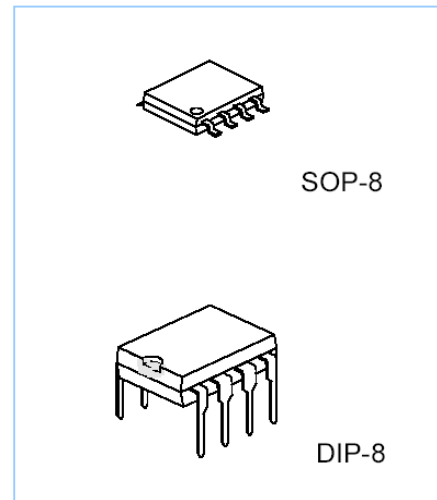
DUAL LOW VOLTAGE POWER AMPLIFIER

DESCRIPTION

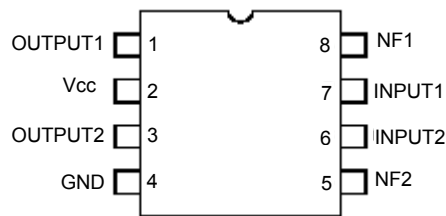
The AV2822 is a monolithic integrated circuit in (8-Pin) dip plastic dual in line package, intended for use as dual audio power amplifier in portable cassette players and radios.

FEATURES

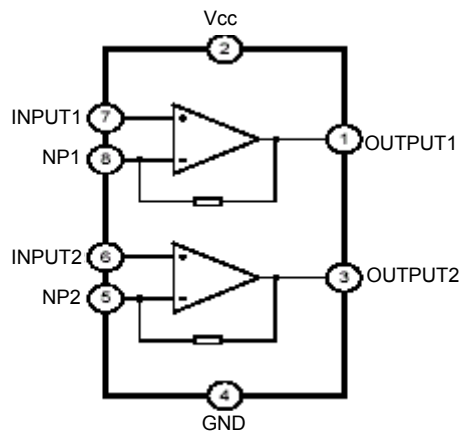
- Supply voltage down to 3V.
- Low crossover distortion.
- Low quiescent circuit current.
- Bridge or stereo configuration.



PIN CONFIGURATIONS



BLOCK DIAGRAM



ORDERING INFORMATION

PIN	SYMBOL	PIN	SYMBOL
1	1OUT	5	2IN-
2	VCC	6	2IN+
3	2OUT	7	1IN+
4	GND	8	1IN-

ABSOLUTE MAXIMUM RATINGS($T_{amb}=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	MIN	MAX	UNIT	
Supply	VCC	-	15	V	
Output current	Io	-	1	A	
Power Dissipation	TA=50°C	PD	-	1	W
	Tcase=50°C		-	1.4	
Operating Temperature	Tamb	-20	70	°C	
Storage Temperature	Tstg	-40	150	°C	

ELECTRICAL CHARACTERISTICS (stereo configuration)

(Vcc=6V, Tamb=25°C, unless otherwise specified).

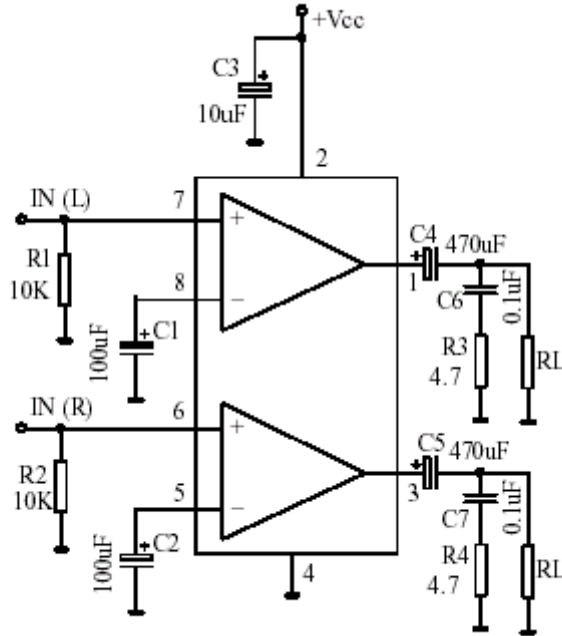
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT		
Supply Voltage	Vcc		1.8	-	15	V		
Quiescent Output Voltage	Vo		-	2.7	-	V		
		Vcc=3V	-	1.2	-			
Quiescent Drain Current	Icc		-	6	9	mA		
Input Bias Current	Iba		-	100	-	nA		
Output Power	Po	F=1kHz, THD=10% %	RL=32 Ω	Vcc=9V	-	300	-	mW
				Vcc=6V	90	120	-	
				Vcc=4.5V	-	60	-	
				Vcc=3V	15	20	-	
				Vcc=2V	-	5	-	
			RL=16 Ω	Vcc=6V	170	220	-	
				Vcc=9V	-	1000	-	
				Vcc=6V	300	380	-	
			RL=4 Ω	Vcc=6V	450	650	-	
				Vcc=4.5V	-	320	-	
Vcc=3V	-	110	-					
Total Harmonic Distortion	THD	Po=0.5W, f=1kHz, RL=8 Ω, Vcc=9V	-	0.3	-	%		
Closed Loop Voltage Gain	Avf	F=1kHz	-	40	-	dB		
Channel Balance	ΔAv		-	-	±1	dB		
Input Resistance	Ri	F=1kHz	100	-	-	K Ω		
Total Input Noise	Vni	Rs=10 K Ω	-	2	-	uV		
		Rs=10 K Ω, B=22Hz-22kHz	-	3	-			
Ripple Rejection	Srip	F=100Hz, C1=C2=100uF	24	30	-	dB		
Channel Separation	CSR	F=1kHz,	-	50	-	dB		

ELECTRICAL CHARACTERISTICS (BTL configuration)(V_{cc}=6V, T_{amb}=25°C, unless otherwise specified).

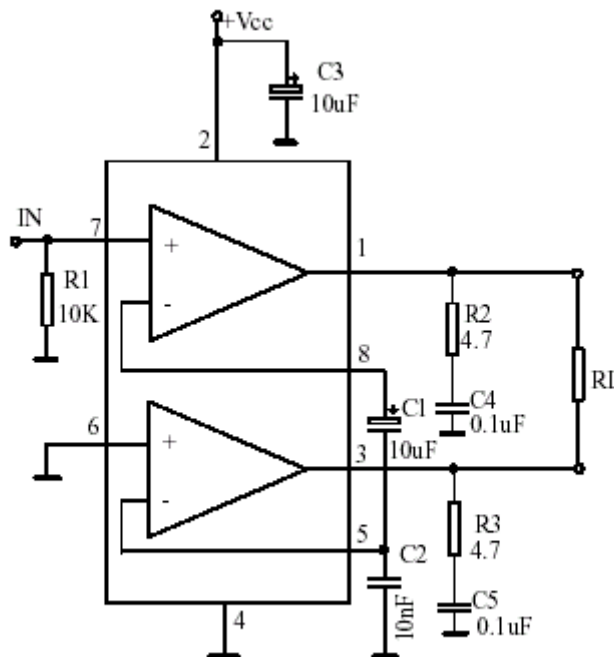
PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT	
Supply Voltage	V _{cc}			1.8	-	15	V	
Quiescent Drain Current	I _{cc}	R _L =∞		-	6	9	mA	
Output Offset Voltage	V _{os}	R _L =8 Ω		-50	-	50	mV	
Input Bias Current	I _{ba}			-	100	-	nA	
Output Power	P _o	F=1kHz, THD=10 %	R _L =32 Ω	V _{cc} =9V	-	1000	-	mW
				V _{cc} =6V	320	400	-	
				V _{cc} =4.5V	-	200	-	
				V _{cc} =3V	50	65	-	
				V _{cc} =2V	-	8	-	
			R _L =16 Ω	V _{cc} =9V	-	2000	-	
				V _{cc} =3V	-	120	-	
				V _{cc} =6V	900	1350	-	
			R _L =8 Ω	V _{cc} =4.5V	-	700	-	
				V _{cc} =3V	-	220	-	
				V _{cc} =4.5V	-	1000	-	
			R _L =4 Ω	V _{cc} =3V	200	350	-	
V _{cc} =2V	-	80		-				
Total Harmonic Distortion	THD	P _o =0.5W, f=1kHz, R _L =8 Ω		-	0.2	-	%	
Closed Loop Voltage Gain	A _{vf}	F=1kHz		-	40	-	dB	
Input Resistance	R _i	F=1kHz		100	-	-	K Ω	
Total Input Noise	V _{ni}	R _s =10 K Ω		-	2.5	-	uV	
		R _s =10 K Ω, B=22Hz-22kHz		-	3	-		
Ripple Rejection	S _{rip}	F=100Hz, C ₁ =C ₂ =100uF		-	40	-	dB	
Bandwidth	BW _p	P _o =1W, R _L =8 Ω		-	120	-	kHz	

TEST CIRCUIT

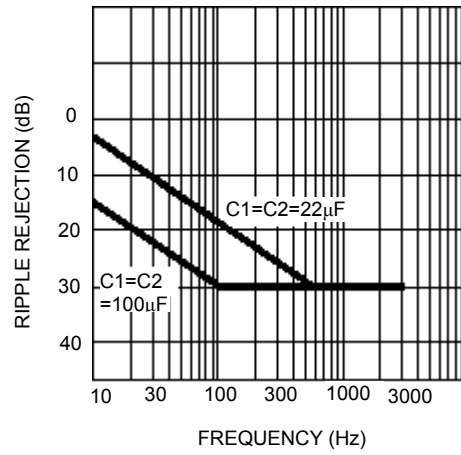
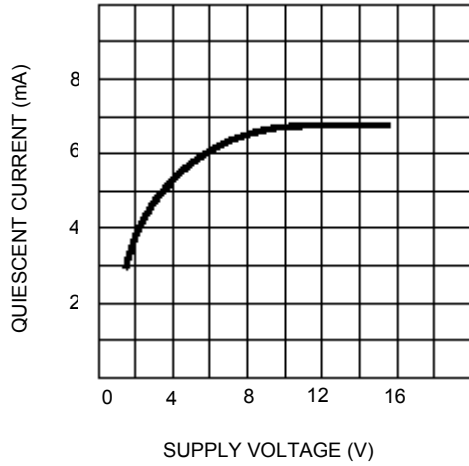
1. STEREO



2. BRIDGE



TYPICAL PERFORMANCE CHARACTERISTICS



SCHEMATIC DIAGRAM

