



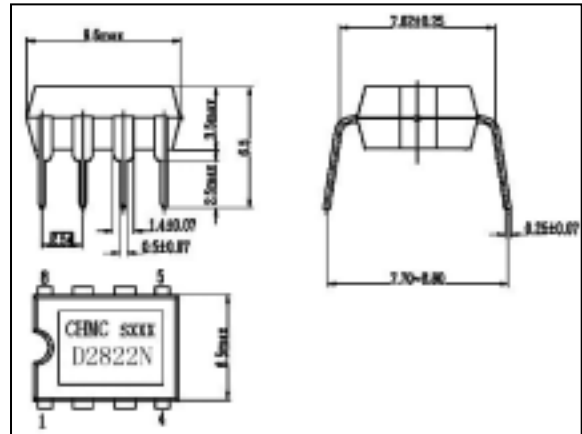
DUAL POWER AMPLIFIER D2822N

GENERAL DESCRIPTION

The D2822N is a monolithic integrated circuit in 8 lead Minidip package. It is intended for use as dual audio power amplifier in portable cassette tape players and radios.

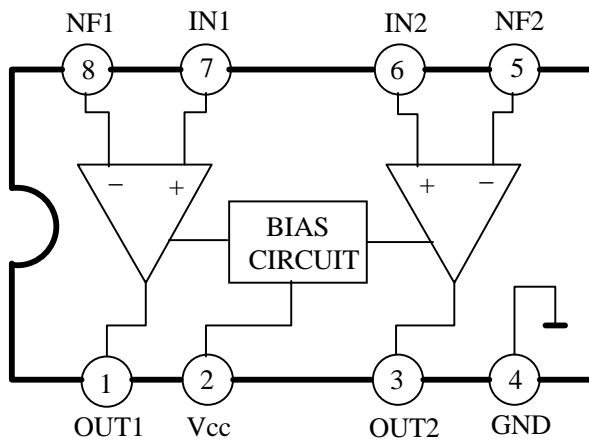
FEATURES

- Dual Low-voltage power amplifier
- Supply voltage down to 1.8V
- Low crossover distortion
- Low quiescent current
- Bridge or stereo configuration

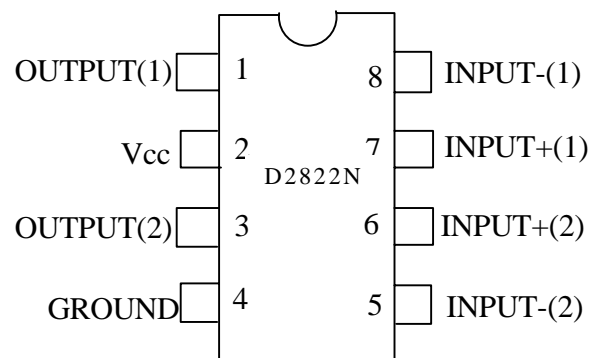


Outline Drawing

BLOCK DIAGRAM



PINNING



MAXIMUM RATINGS

Characteristics	Symbol	Value	Unit
Supply Voltage	V _{cc}	15	V
Output Peak Current	I _{pk}	1	A
Total Power Dissipation(at T _{amb} =50°C)	P _D	1	W
Total Power Dissipation(at T _{case} =50°C)	P _D	1.4	W
Operating Ambient Temperature Range	T _a	-20~70	°C
Storage Temperature Range	T _{stg}	-40~150	°C

ELECTRICAL CHARACTERISTICS

1.Stereo Test Circuit(Unless otherwise specified V_{cc}=6V,T_{amb}=25°C)

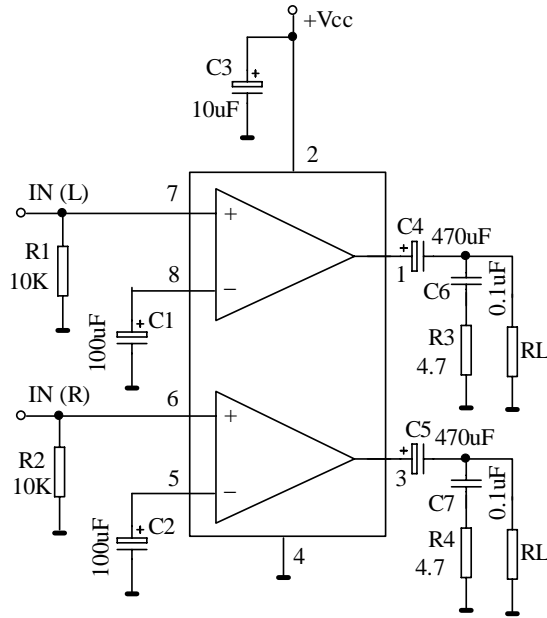
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Supply Voltage	V _{cc}		1.8		15	V
Quiescent Output Voltage	V _o			2.7		V
		V _{cc} =3V		1.2		V
Quiescent Drain Current	I _d			6	9	mA
Input Bias Current	I _{BA}			100		nA
Output Power (Each Channel)	P _o	d=10% f=1kHz V _{cc} =3V R _L =4 V _{cc} =3V R _L =32		110 20		mW
		d=10% f=1kHz V _{cc} =9V R _L =8 V _{cc} =6V R _L =4 V _{cc} =4.5V R _L =4	0.4	1 0.65 0.32		W
Distortion	THD	P _o =0.5W R _L =8 f=1kHz V _{cc} =9V		0.3		%
Closed Loop Voltage Gain	A _{vf}	f=1kHz		40		dB
Channel Balance	ΔA _{vf}				± 1	dB
Input Resistance	R _i	f=1kHz	100			k
Total Input Noise	V _{NI}	R _s =10k B=Cure A		2		μV
		R _s =10k B=22Hz to22kHz		3		
Supply Voltage rejection	SVR	f=100Hz C1=C2=100 μF	24	30		dB
Channel Separation	CSR	f=1kHz		50		dB

2. Bridge Test Circuit (Unless otherwise specified $V_{CC}=6V, T_{amb}=25^{\circ}C$)

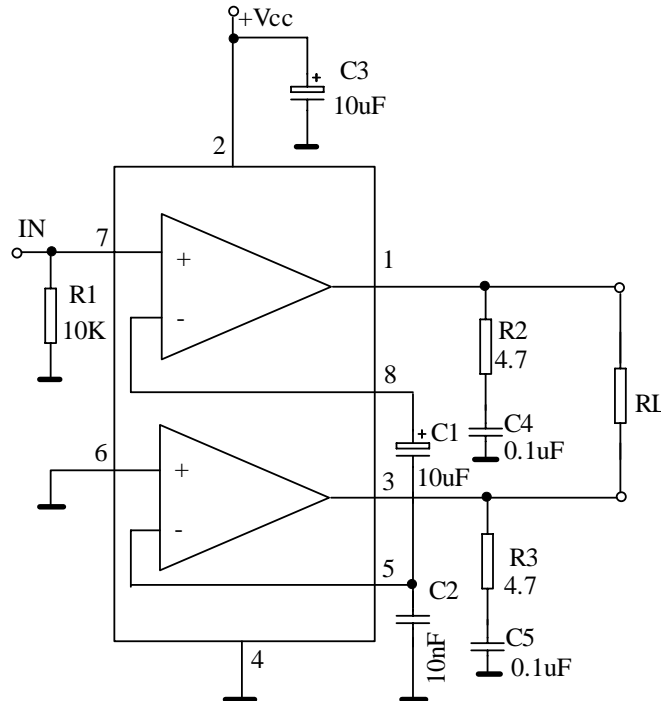
Characteristic	Sym-bol	Test Condition	Min.	Typ.	Max.	Unit
Supply Voltage	V_{CC}		1.8		15	V
Quiescent Drain Current	I_d	$R_L=\infty$		6	9	mA
Output Offset Voltage (Between the Outputs)	V_{OS}	$R_L=8$			± 50	mV
Input Bias Current	I_b			100		nA
Output Power	P_o	$d=10\% \quad f=1kHz$ $V_{CC}=9V \quad R_L=16$ $V_{CC}=6V \quad R_L=8$ $V_{CC}=4.5V \quad R_L=8$ $V_{CC}=4.5V \quad R_L=4$		2 1.35 0.7 1		W
		$V_{CC}=3V \quad R_L=4$ $V_{CC}=2V \quad R_L=4$	200	350 80		mW
Distortion	THD	$P_o=0.5W \quad R_L=8 \quad f=1kHz$		0.2		%
Closed Loop Voltage Gain	A_{vf}	$f=1kHz$		40		dB
Input Resistance	R_i	$f=1kHz$	100			k
Total Input Noise	V_{NI}	$R_s=10k \quad \text{Curve A}$		2.5		μV
		$R_s=10k \quad B=22Hz \text{ to } 22kHz$		3		
Supply Voltage Rejection	SVR	$f=100Hz$		40		dB
Power Bandwidth (-3dB)	B	$R_L=8 \quad P_o=1W$		120		kHz

TEST CIRCUIT

1. STEREO TEST CIRCUIT

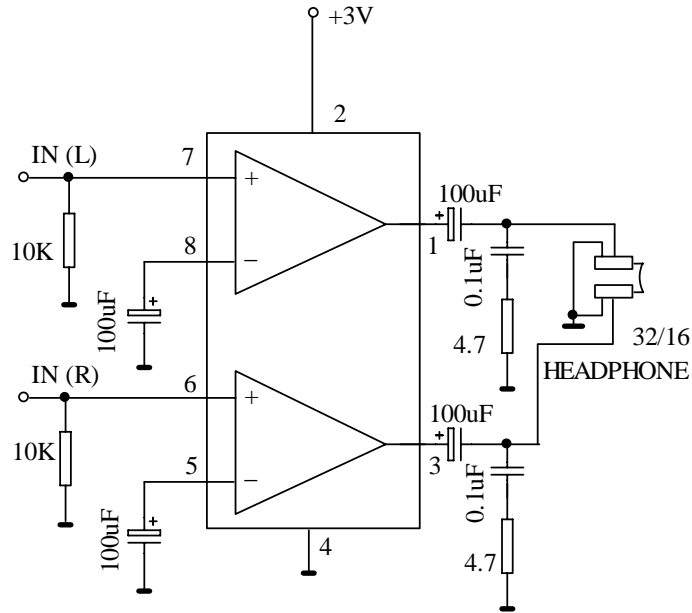


2. BRIDGE TEST CIRCUIT



APPLICATION CIRCUIT

1. Typical application in portable players



CHARACTERISTICS CURVES

Fig. 4 - Quiescent current vs. supply voltage

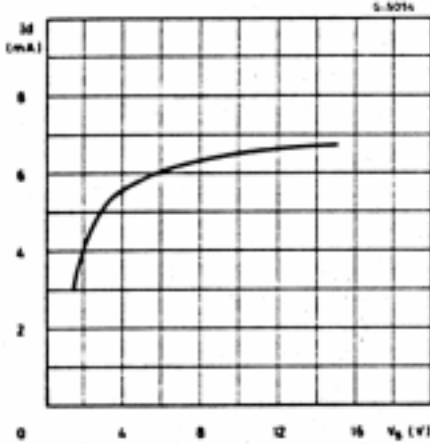


Fig. 5 - Supply voltage rejection vs. frequency (stereo)

