

# TDA2822M(12V) LINEAR INTEGRATED CIRCUIT

## DUAL LOW VOLTAGE POWER AMPLIFIER

### DESCRIPTION

The TDA2822M is a monolithic integrated audio amplifier in a 8-Pin plastic dual in line package. It is designed for portable cassette players and radios.

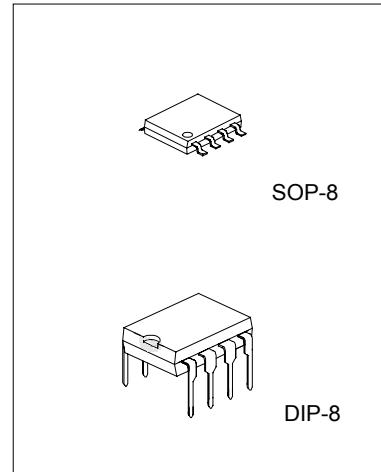
### FEATURES

\*Wide operating supply voltage: $V_{cc}=1.8V\text{--}12V$

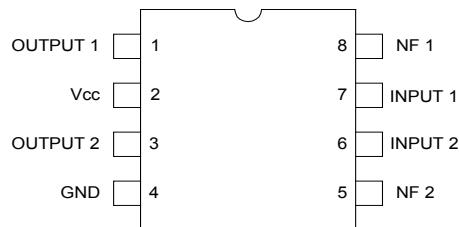
\*Low crossover distortion.

\*Low quiescent circuit current.

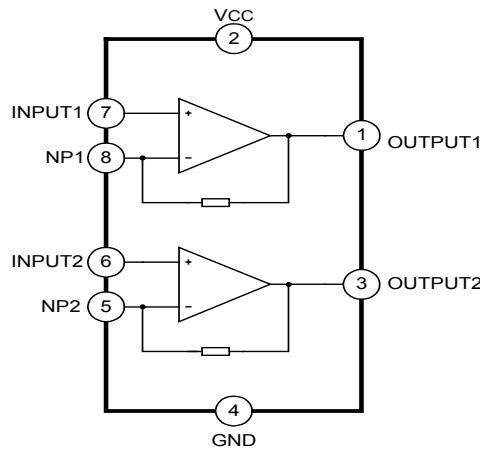
\*Bridge/stereo configuration.



### PIN CONFIGURATIONS



### BLOCK DIAGRAM



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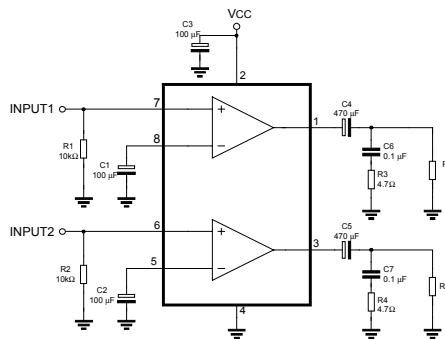
## ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	12	V
Output Peak Current	I <sub>o</sub> (peak)	1	A
Power Dissipation	P <sub>D</sub>	DIP at $T_{amb}=50^\circ\text{C}$ 1.0 SOP at $T_{amb}=50^\circ\text{C}$ 0.5	W
Operating Temperature	T <sub>opr</sub>	-20 ~ +70	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +150	°C

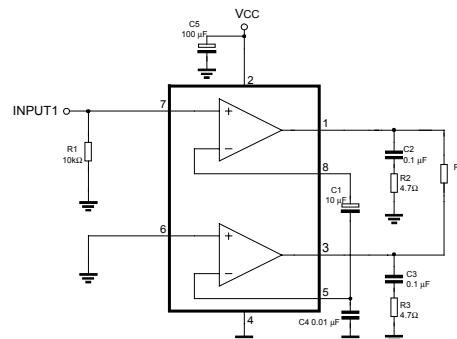
## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ , $VCC=6\text{V}$ , $f=1\text{kHz}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Supply Voltage	Vcc		1.8		12	V
Quiescent Circuit Current	I <sub>cc</sub>	$V_i=0$		9		mA
Closed Loop Voltage Gain	A <sub>v</sub>	Stereo		40		dB
Closed Loop Voltage Gain	A <sub>v</sub>	Bridge		40		dB
Channel Balance	C <sub>B</sub>	Stereo	-1	0	1	dB
Output Power	P <sub>O</sub>	Stereo, $VCC=6\text{V}$ , $R_L=4\Omega$ , THD=10%	0.4(DIP) 0.28(SOP)	0.65(DIP) 0.45(SOP)		W
Output Power	P <sub>O</sub>	Stereo, $VCC=3\text{V}$ , $R_L=4\Omega$ , THD=10%		0.11(DIP) 0.07(SOP)		W
Output Power	P <sub>O</sub>	Bridge, $VCC=6\text{V}$ , $R_L=4\Omega$ , THD=10%	0.9(DIP) 0.63(SOP)	1.35(DIP) 0.94(SOP)		W
Output Power	P <sub>O</sub>	Bridge, $VCC=6\text{V}$ , $R_L=4\Omega$ , THD=10%		0.35(DIP) 0.24(SOP)		W
Total Harmonic Distortion	THD	Stereo, $R_L=8\Omega$ , $P_o=0.2\text{W}$		0.5		%
Total Harmonic Distortion	THD	Bridge, $R_L=8\Omega$ , $P_o=0.5\text{W}$		0.5		%
Ripple Rejection	R <sub>R</sub>	Stereo, $f=100\text{Hz}$ , $C_3=100\mu\text{F}$	24	30		dB
Output Noise Voltage	V <sub>NO</sub>	Stereo, $BW(-3\text{dB})=20\text{Hz}$ $\sim 20\text{kHz}$		0.5	2.0	mV
Cross Talk	C <sub>T</sub>	Stereo, $f=1\text{kHz}$		50		dB
Input Resistance	R <sub>i</sub>		100			kΩ

TEST CIRCUIT 1:STEREO

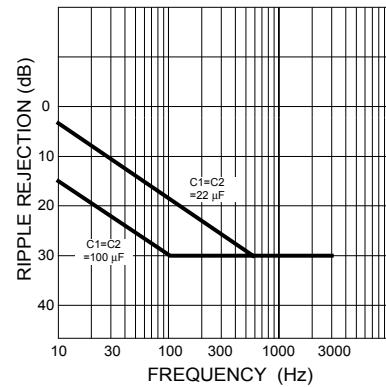
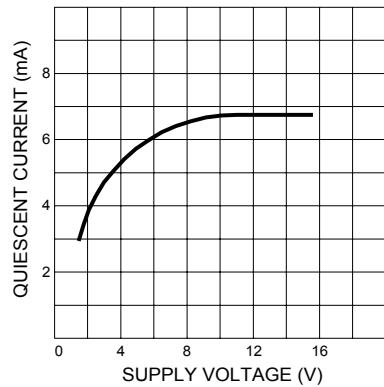


TEST CIRCUIT 2:BRIDGE



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## TYPICAL PERFORMANCE CHARACTERISTICS



## SCHEMATIC DIAGRAM

