

# UTC2822H

# LINEAR INTEGRATED CIRCUIT

## DUAL LOW VOLTAGE POWER AMPLIFIER

### DESCRIPTION

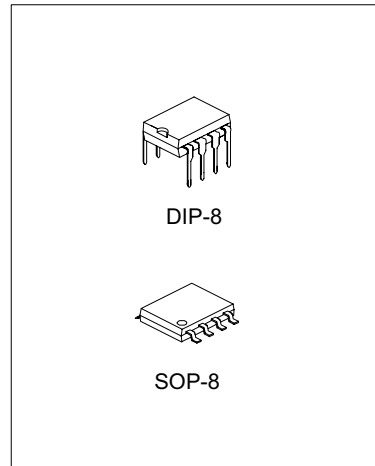
The UTC2822H is a monolithic integrated audio amplifier in a 8-pin DIP and SOP package. It is designed for portable cassette players and radios.

### FEATURES

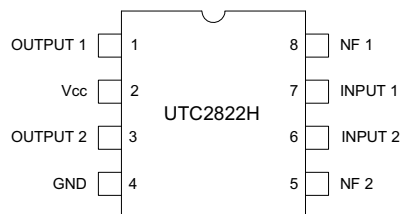
- \* Wide operating supply voltage:  $V_{cc}=1.8V-6V$
- \* Low crossover distortion
- \* Low quiescent circuit current
- \* bridge/stereo configuration

### ORDERING INFORMATION

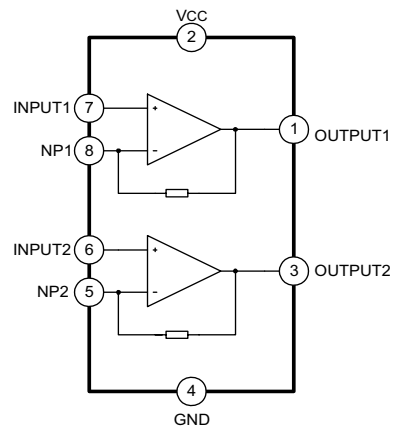
Device	Package
UTC2822	DIP-8-300-2.54
UTC2822E	SOP-8-225-1.27



### PIN CONFIGURATION



### BLOCK DIAGRAM



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

Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	9	V
Output Peak Current	I <sub>o(peak)</sub>	1	A
Power Dissipation	P <sub>D</sub>	at T <sub>amb</sub> =50°C 1.0 at T <sub>case</sub> =50°C 1.4	W
Operating Temperature	T <sub>opr</sub>	-20~+70	°C
Storage Temperature	T <sub>stg</sub>	-40~+150	°C

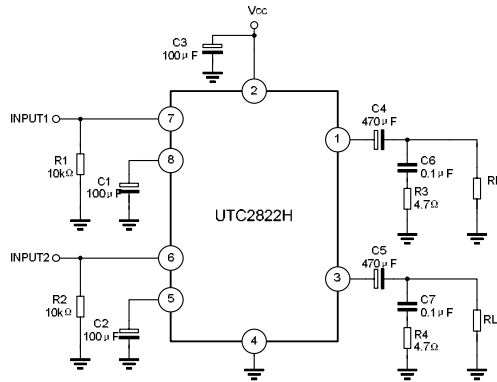
**ELECTRICAL CHARACTERISTICS**(T<sub>a</sub>=25°C, V<sub>CC</sub>=6V, f=1kHz, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Operating Supply Voltage	V <sub>CC</sub>		1.8		6	V
Quiescent Circuit Current	I <sub>CC</sub>	V <sub>i</sub> =0		6.5		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	CB	Stereo	-1	0	1	dB
Output Power	P <sub>O</sub>	Stereo, V <sub>CC</sub> =3V, R <sub>L</sub> =8Ω, THD=10%		56		mW
Output Power	P <sub>O</sub>	Stereo, V <sub>CC</sub> =6V, R <sub>L</sub> =8Ω, THD=10%		0.35		W
Output Power	P <sub>O</sub>	Bridge, V <sub>CC</sub> =6V, R <sub>L</sub> =8Ω, THD=10%		0.7		W
Output Power	P <sub>O</sub>	Bridge, V <sub>CC</sub> =3V, R <sub>L</sub> =8Ω, THD=10%		0.15		W
Total Harmonic Distortion	THD	Stereo, R <sub>L</sub> =8Ω, P <sub>o</sub> =0.5W		0.3		%
Total Harmonic Distortion	THD	Bridge, R <sub>L</sub> =8Ω, P <sub>o</sub> =0.5W		0.2		%
Ripple Rejection	RR	Stereo, f=100Hz, C <sub>3</sub> =100μF	24	30		dB
Total Input Noise Voltage	V <sub>NI</sub>	BW(-3dB)=20Hz~20kHz		3		μV
Cross Talk	CT	Stereo, f=1kHz		50		dB
Input Resistance	R <sub>i</sub>		100			kΩ

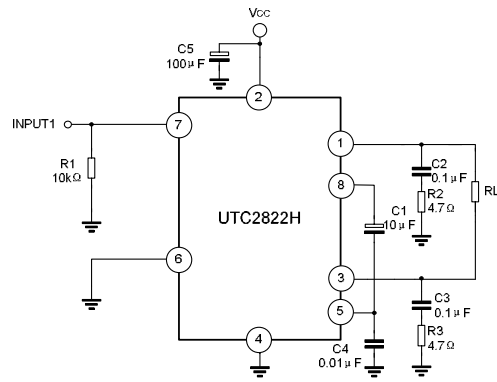
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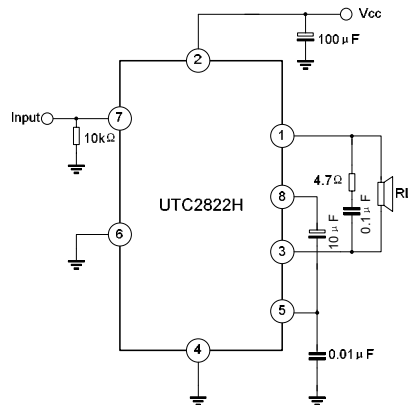
## TEST CIRCUIT 1: STEREO



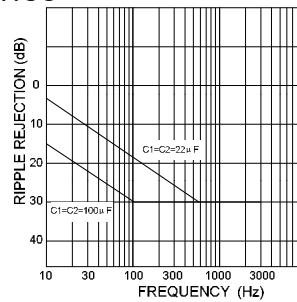
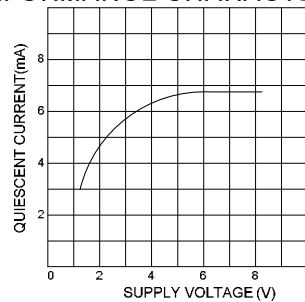
## TEST CIRCUIT 2: BRIDGE



## BTL APPLICATION CIRCUIT



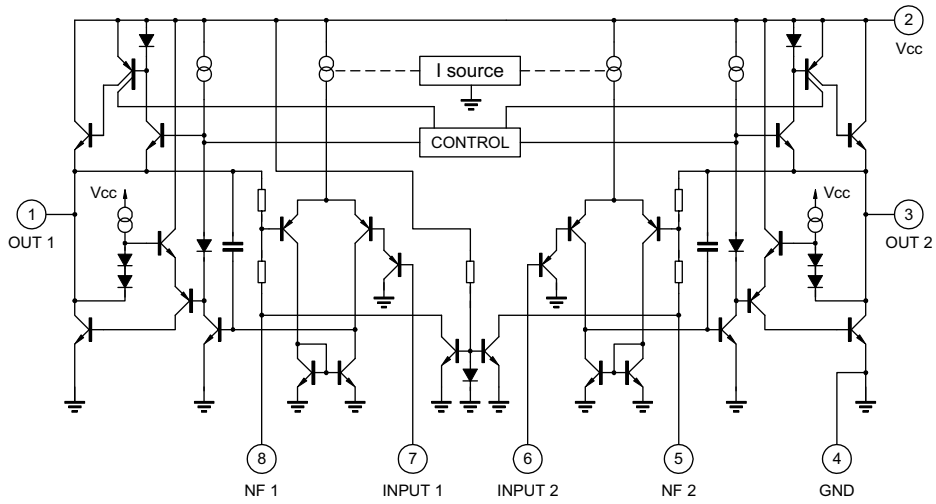
## TYPICAL PERFORMANCE CHARACTERISTICS



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## SCHEMATIC DIAGRAM



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**PACKAGE OUTLINE**

