

# UTC2822

# LINEAR INTEGRATED CIRCUIT

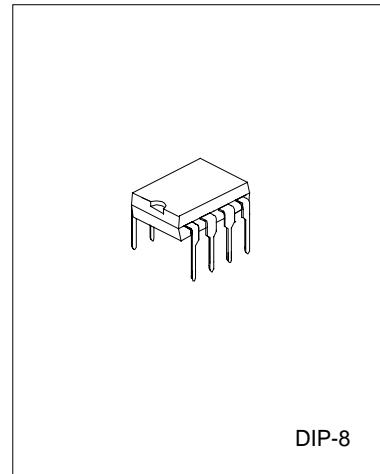
## DUAL LOW VOLTAGE POWER AMPLIFIER

### DESCRIPTION

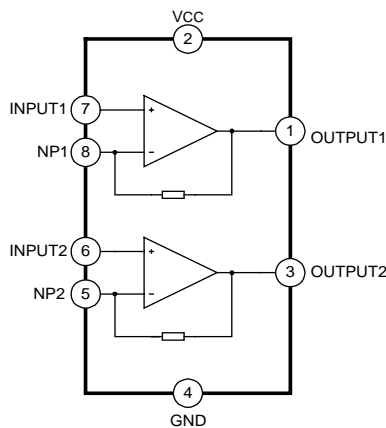
The UTC2822 is a monolithic integrated audio amplifier in a 8-Pin plastic Dual in line package. It is designed for portable cassette players and radios.

### FEATURES

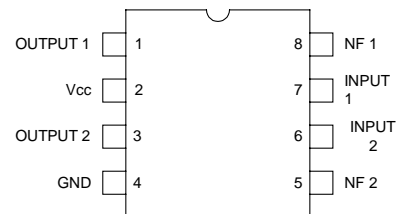
- \*Wide operating supply voltage:  $V_{CC}=1.8V-12V$
- \*Low crossover distortion
- \*Low quiescent circuit current
- \*bridge/stereo configuration



### BLOCK DIAGRAM



### PIN CONFIGURATION



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

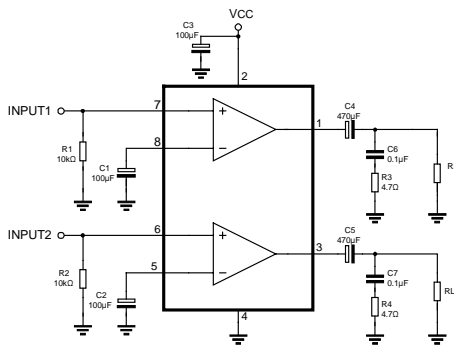
Characteristic	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	15	V
Output Peak Current	$I_o(\text{peak})$	1	A
Power Dissipation	$P_D$	at $T_{amb}=50^{\circ}C$ 1.0 at $T_{case}=50^{\circ}C$ 1.4	W
Operating Temperature	$T_{opr}$	-20~+70	$^{\circ}C$
Storage Temperature	$T_{stg}$	-40~+150	$^{\circ}C$

**ELECTRICAL CHARACTERISTICS**

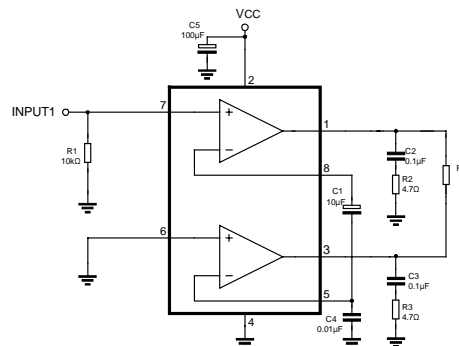
( $T_a=25^{\circ}\text{C}$ ,  $V_{CC}=6\text{V}$ ,  $f=1\text{kHz}$ , unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Operating Supply Voltage	$V_{CC}$		1.8		9	V
Quiescent Circuit Current	$I_{CC}$	$V_i=0$		9		mA
Closed Loop Voltage Gain	$A_v$	Stereo		40		dB
Closed Loop Voltage Gain	$A_v$	Bridge		40		dB
Channel Balance	CB	Stereo	-1	0	1	dB
Output Power	$P_o$	Stereo, $V_{CC}=6\text{V}$ , $R_L=4\Omega$ , THD=10%	0.4	0.65		W
Output Power	$P_o$	Stereo, $V_{CC}=3\text{V}$ , $R_L=4\Omega$ , THD=10%		0.11		W
Output Power	$P_o$	Bridge, $V_{CC}=6\text{V}$ , $R_L=4\Omega$ , THD=10%	0.9	1.35		W
Output Power	$P_o$	Bridge, $V_{CC}=3\text{V}$ , $R_L=4\Omega$ , THD=10%		0.35		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	RR	Stereo, $f=100\text{Hz}$ , $C_3=100\mu\text{F}$	24	30		dB
Output Noise Voltage	$V_{NO}$	Stereo, BW(-3dB)=20Hz~20kHz		0.5	2.0	mV
Cross Talk	CT	Stereo, $f=1\text{kHz}$		50		dB
Input Resistance	$R_i$		100			k $\Omega$

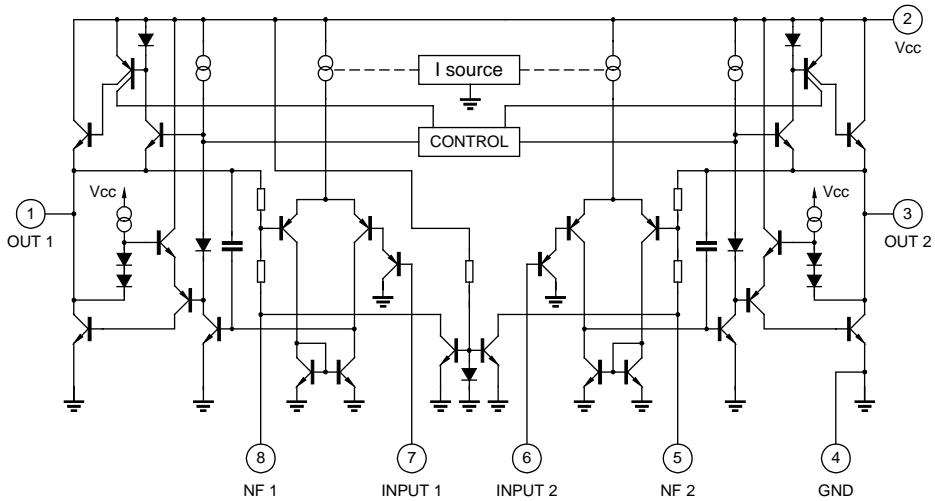
**TEST CIRCUIT 1: STEREO**



**TEST CIRCUIT 2: BRIDGE**



**SCHEMATIC DIAGRAM**



**TYPICAL PERFORMANCE CHARACTERISTICS**

