



# TDA2822H

## LINEAR INTEGRATED CIRCUIT

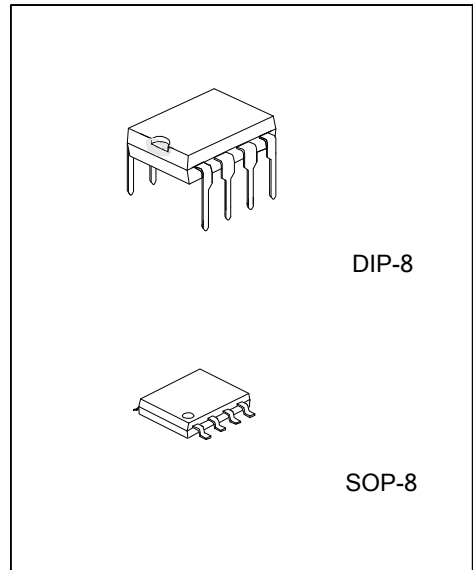
### DUAL LOW VOLTAGE POWER AMPLIFIER

#### DESCRIPTION

The UTC TDA2822H 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:  $V_{CC}=1.8V\sim 6V$ .
- \*Low crossover distortion.
- \*Low quiescent circuit current.
- \*Bridge/stereo configuration.

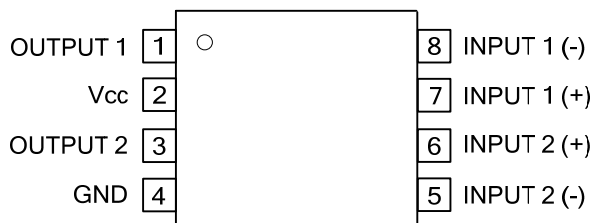


#### ORDERING INFORMATION

Order Number		Package	Packing
Lead Free	Halogen Free		
TDA2822HL-D08-T	TDA2822HG-D08-T	DIP-8	Tube
TDA2822HL-S08-T	TDA2822HG-S08-T	SOP-8	Tube
TDA2822HL-S08-R	TDA2822HG-S08-R	SOP-8	Tape Reel

<p>TDA2822HL-D08-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Free</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) D08: DIP-8, S08: SOP-8</p> <p>(3) L: Lead Free, G: Halogen Free</p>
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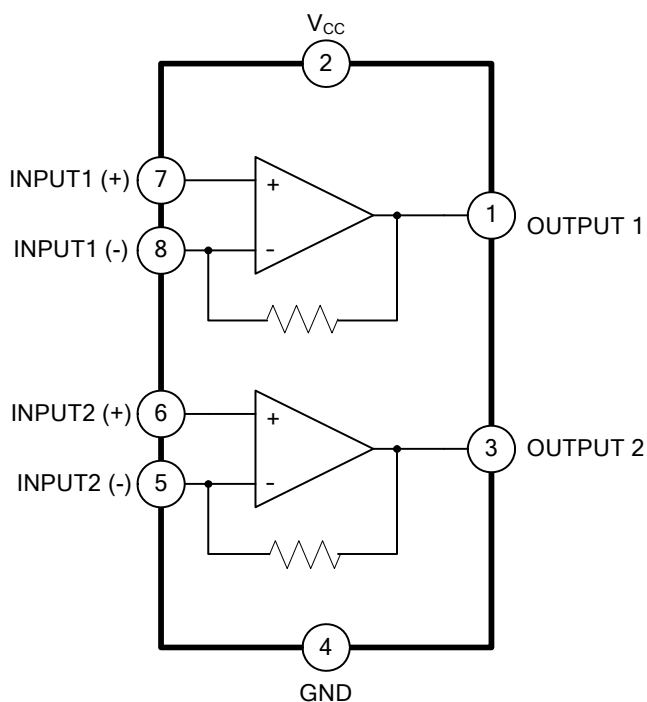
### ■ PIN CONFIGURATION



### ■ PIN DESCRIPTION

PIN NO	PIN NAME	DESCRIPTION
1	OUTPUT 1	Output of Channel 1
2	V <sub>CC</sub>	Supply Voltage
3	OUTPUT 2	Output of Channel 2
4	GND	Ground.
5	INPUT 2(-)	Inverting Input of Channel 2
6	INPUT 2(+)	Non-Inverting Input of Channel 2
7	INPUT 1 (+)	Non-Inverting Input of Channel 1
8	INPUT 1 (-)	Inverting Input of Channel 1

### ■ BLOCK DIAGRAM



■ **ABSOLUTE MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		$V_{CC}$	15	V
Output Peak Current		$I_{O(\text{peak})}$	1	A
Power Dissipation	$T_A=50^{\circ}\text{C}$	$P_D$	1.0	W
	$T_C=50^{\circ}\text{C}$		1.4	W
	$T_A=50^{\circ}\text{C}$		0.5	W
Operating Temperature		$T_{OPR}$	-20~+85	$^{\circ}\text{C}$
Storage Temperature		$T_{STG}$	-40 ~ +150	$^{\circ}\text{C}$

■ **ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ ,  $V_{CC}=4.5\text{V}$ , BTL parameter, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT	
Operating Supply Voltage	$V_{CC}$			1.8		6	V	
Quiescent Circuit Current	$I_{CCQ}$	$R_L=\infty$			9		mA	
Output Offset Voltage	$V_{OS}$	$R_L=8\Omega$				$\pm 50$	mV	
Input Base Current	$I_B$				100		nA	
Output Power	$P_O$	$f=1\text{kHz}$ , THD=10%	$R_L=32\Omega$	$V_{CC}=6\text{V}$	300	320	mW	
				$V_{CC}=4.5\text{V}$		200		
				$V_{CC}=3\text{V}$	50	65		
				$V_{CC}=2\text{V}$		8		
			$R_L=16\Omega$	$V_{CC}=6\text{V}$		600		
				$V_{CC}=3\text{V}$		120		
			$R_L=8\Omega$	$V_{CC}=4.5\text{V}$		700		
				$V_{CC}=3\text{V}$		220		
$R_L=4\Omega$	$V_{CC}=3\text{V}$	200	350					
Total Harmonic Distortion	THD	$P_O=0.5\text{W}$ , $R_L=8\Omega$ , $P_O=1\text{kHz}$			0.2		%	
Closed Loop Voltage Gain	$A_{VF}$	$f=1\text{kHz}$			39		dB	
Input Resistance	$Z_{IN}$	$f=1\text{kHz}$		100			k $\Omega$	
Total Input Noise	$e_N$	$R_S=10\text{k}\Omega$	$B=22\text{Hz} \sim 22\text{kHz}$		3		$\mu\text{V}$	
Supply Voltage Rejection	SVR	$f=100\text{Hz}$			40		dB	
Power Bandwidth	BWp	$R_L=8\Omega$ , $P_O=1\text{W}$			120		kHz	

## APPLICATION CIRCUIT

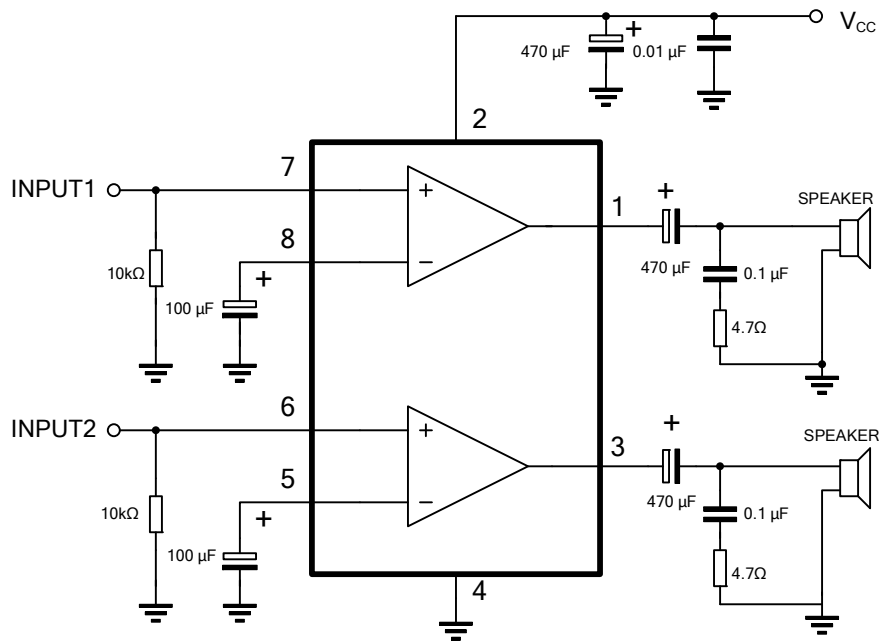


Fig 1. STEREO

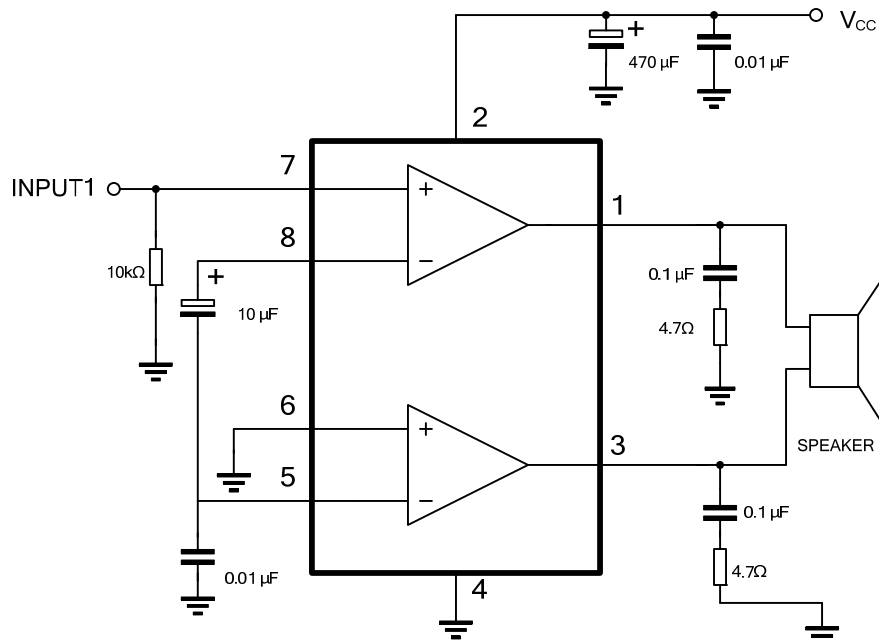


Fig 2. BRIDGE

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