



# TDA7266

## LINEAR INTEGRATED CIRCUIT

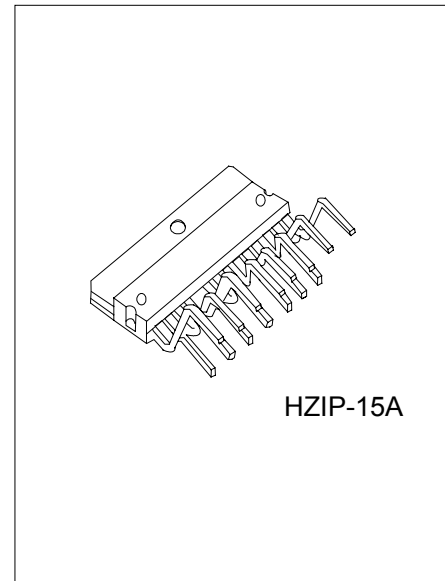
### 7+7W DUAL BRIDGE AMPLIFIER

#### DESCRIPTION

The UTC **TDA7266** is a 7+7W dual bridge amplifier specially designed for TV and Portable Radio applications.

#### FEATURES

- \* Wide supply voltage range (3 ~ 18V)
- \* Minimum external components
- \* No SWR capacitor
- \* No bootstrap
- \* No boucherot cells
- \* Internally fixed gain
- \* STAND-BY & MUTE functions
- \* Short circuit protection
- \* Thermal overload protection



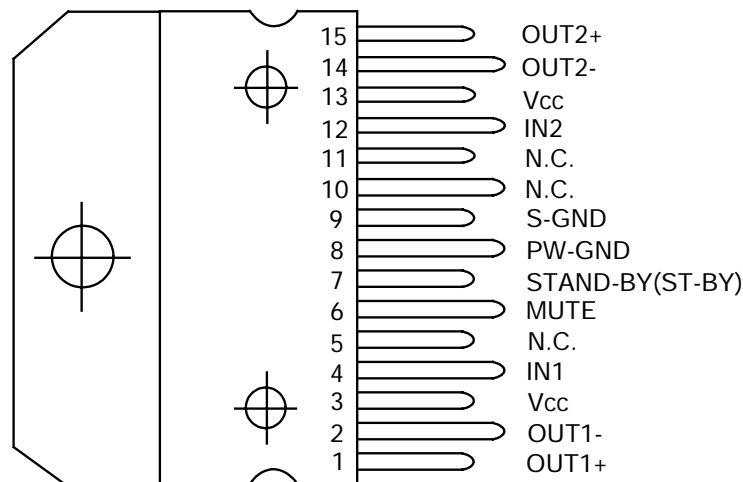
HZIP-15A

\*Pb-free plating product number: TDA7266L

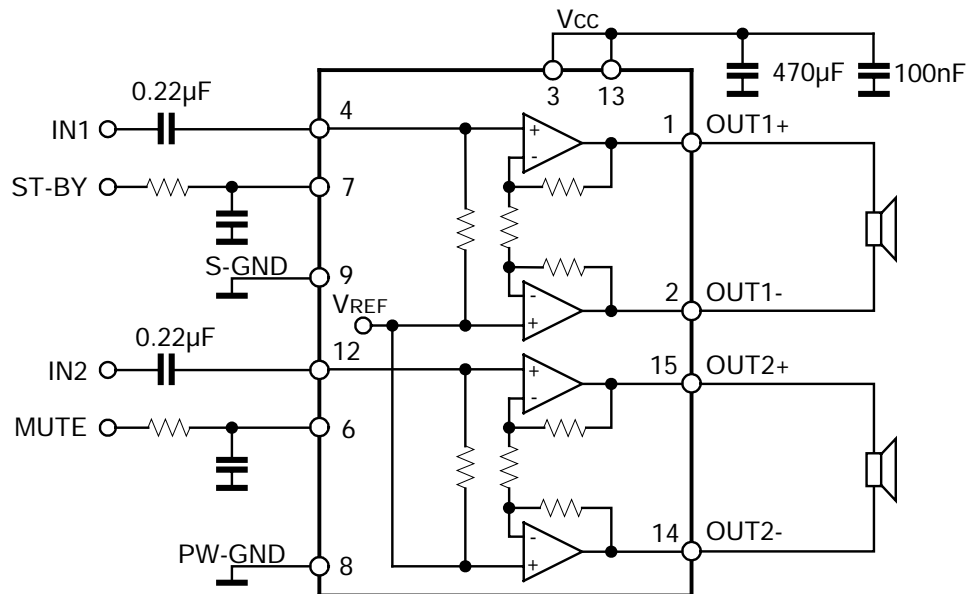
#### ORDERING INFORMATION

Ordering Number		Package	Packing
Normal	Lead Free Plating		
TDA7266-J15-A-T	TDA7266L-J15-A-T	HZIP-15A	Tube

#### PIN CONFIGURATION



■ BLOCK DIAGRAM



### ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V_{CC}$	20	V
Output Peak Current (internally limited)	$I_{OUT}$	2	A
Power Dissipation ( $T_C = 70^\circ$ )	$P_D$	33	W
Junction Temperature	$T_J$	+125	
Operating Temperature	$T_{OPR}$	0 ~ +70	
Storage Temperature	$T_{STG}$	-40 ~ +150	

Note: 1. Absolute maximum ratings are those values beyond which the device which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. The device is guaranteed to meet performance specification within 0 ~ +70 operating temperature range and assured by design from -20 ~ +85, characteristic and correlation with static process control.

### ■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Thermal Resistance Junction to Case	$J_C$	1.4	/W

### ■ ELECTRICAL CHARACTERISTICS ( $V_{CC}=11V$ , $R_L=8\Omega$ , $f=1kHz$ , $T_a=25^\circ$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Range	$V_{CC}$		3	11	18	V
Output Offset Voltage	$V_{O(OFF)}$				120	mV
Total Output Noise Voltage	eN	A curve, $f=20Hz \sim 20kHz$		150		$\mu V$
Total Quiescent Current	$I_Q$			48	65	mA
Input Resistance	$R_{IN}$		25	30		k $\Omega$
Output Power	$P_{OUT}$	THD=10%	6.3	7		W
Total Harmonic Distortion	THD	$P_{OUT}=1W$		0.05	0.2	%
		$P_{OUT}=0.1 \sim 2W$ , $f=100Hz \sim 15kHz$			1	%
Crosstalk	$C_T$		46	60		dB
Closed Loop Voltage Gain	$G_V$		25	26	27	dB
Voltage Gain Matching	$G_V$				0.5	dB
Supply Voltage Rejection	SVR	$f=100Hz$ , $V_R=0.5V$	40	56		dB
Thermal Threshold	$T_t$			150		
<b>MUTE FUNCTION</b>						
Mute Threshold	$V_{MTHD}$	for $V_{CC}>6.4V$ , $V_{OUT}=-30dB$	2.3	2.9	4.1	V
		for $V_{CC}<6.4V$ , $V_{OUT}=-30dB$	$V_{CC}/2-1.0$	$V_{CC}/2-0.75$	$V_{CC}/2-0.5$	V
Mute Attenuation	$A_{MUTE}$		60	80		dB
<b>STAND BY FUNCTION</b>						
STAND-BY Threshold	$V_{TST-BY}$		0.8	1.3	1.8	V
STAND-BY Current $V_6=GND$	$I_{ST-BY}$				100	$\mu A$

## ■ APPLICATION SUGGESTION

### For Microprocessor Application

In order to avoid annoying "Pop-Noise" during Turn-On/Off transients, it is necessary to guarantee the right ST-BY and MUTE signals sequence. It is quite simple to obtain this function using a microprocessor (Fig 1 and Fig 2).

At first ST-BY signal (from  $\mu\text{P}$ ) goes high and the voltage across the ST-BY terminal (Pin 7) starts to increase exponentially. The external RC network is intended to turn-on slowly the biasing circuits of the amplifier, this to avoid "POP" and "CLICK" on the outputs.

When this voltage reaches the ST-BY threshold level, the amplifier is switched-on and the external capacitors in series to the input terminals (C3, C5) start to charge.

It's necessary to maintain the mute signal low until the capacitors are fully charged, this to avoid that the device goes in play mode causing a loud "Pop Noise" on the speakers.

A delay of 100 ~ 200ms between ST-BY and MUTE signals is suitable for a proper operation.

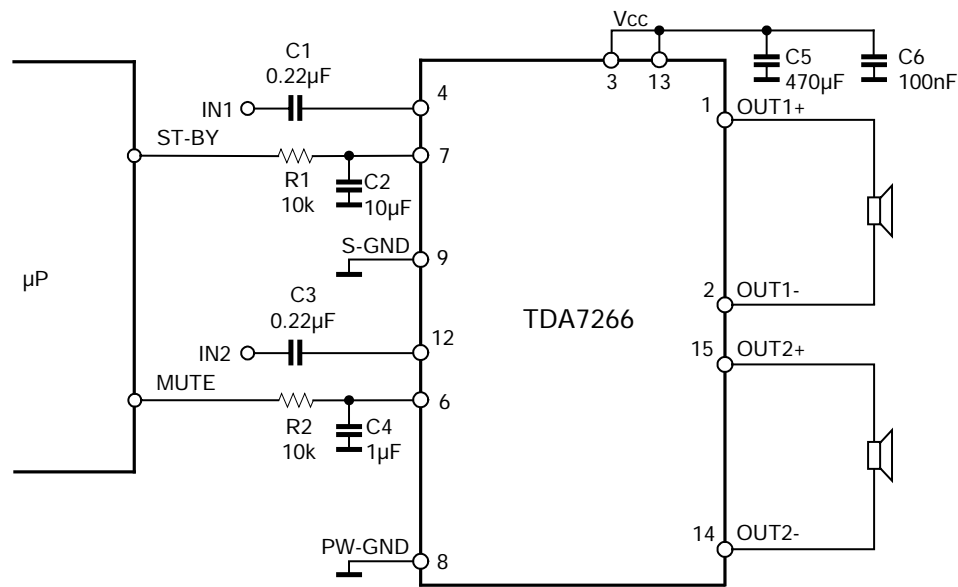


Fig. 1 Microprocessor Application

## ■ APPLICATION SUGGESTION(Cont.)

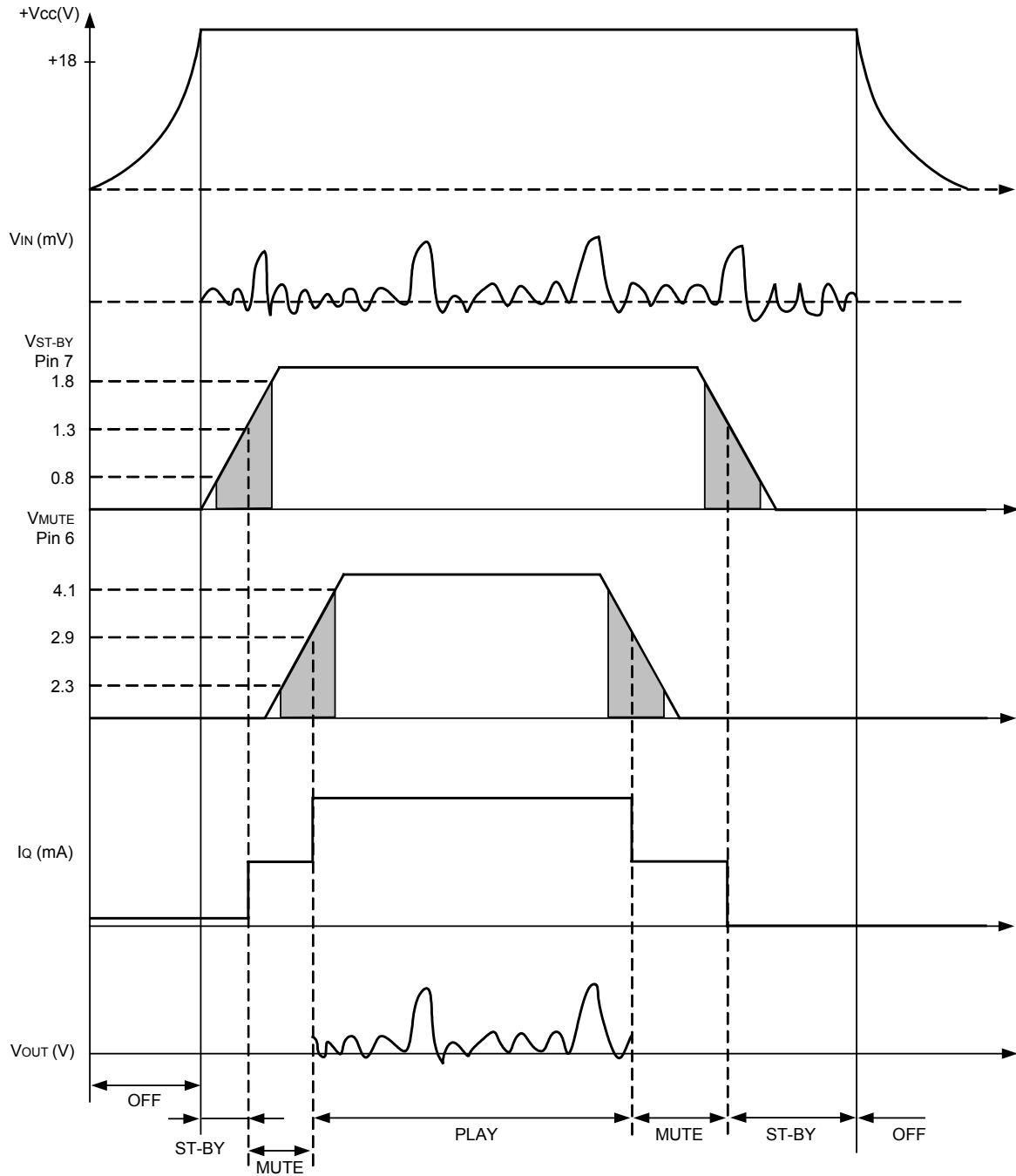


Fig 2 Microprocessor Driving Signals

## ■ APPLICATION SUGGESTION(Cont.)

### For Low Cost Application

In low cost applications where the mP is not present, the suggested circuit is shown in Fig 3.

The ST-BY and mute terminals are tied together and they are connected to the supply line via an external voltage divider.

The device is switched-on/off from the supply line and the external capacitor C4 is intended to delay the ST-BY and MUTE threshold exceeding, avoiding "Popping" problems.

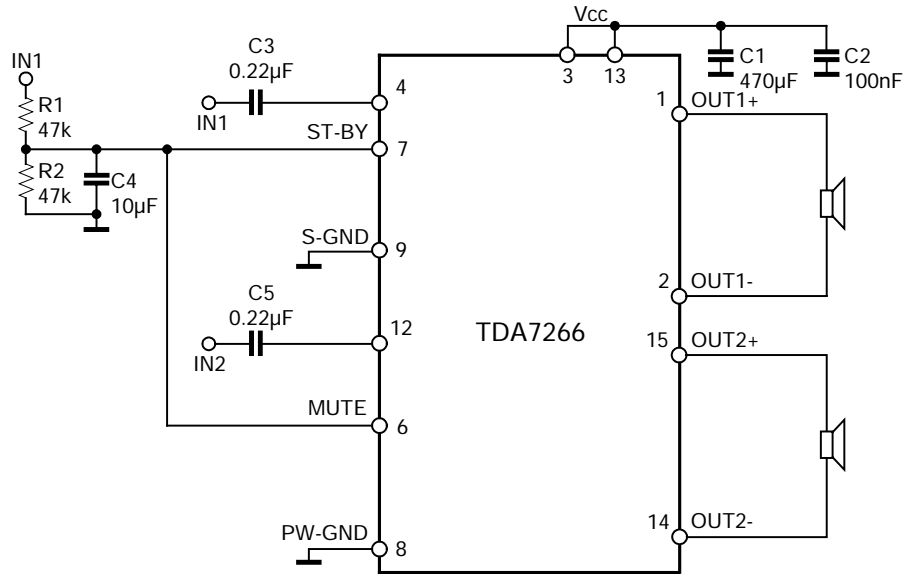
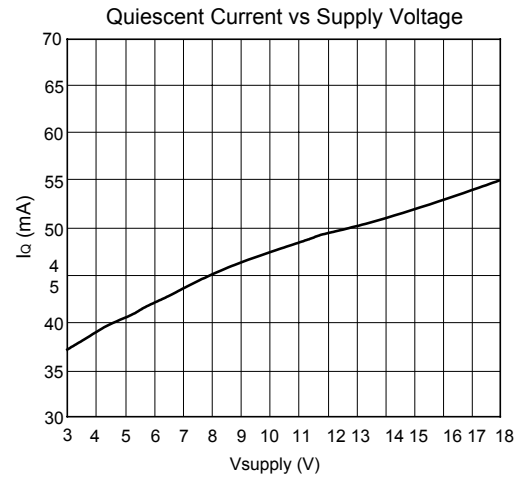
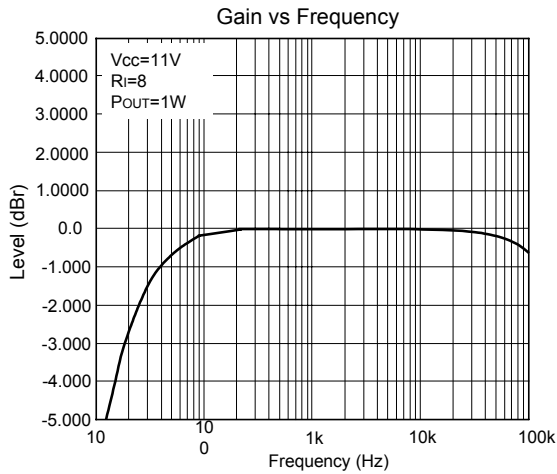


Fig 3 Stand Alone Low Cost Application

## ■ TYPICAL CHARACTERISTICS



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