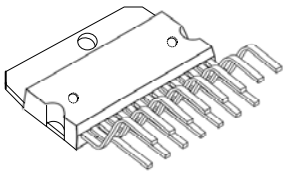
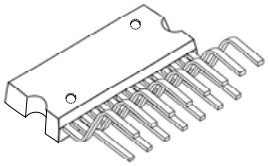
TDA7266

LINEAR INTEGRATED CIRCUIT

7+7W DUAL BRIDGE AMPLIFIER



HZIP-15A



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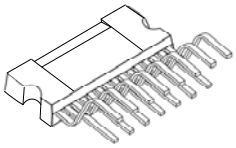


HZIP-15D

■ 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

■ ORDERING INFORMATION

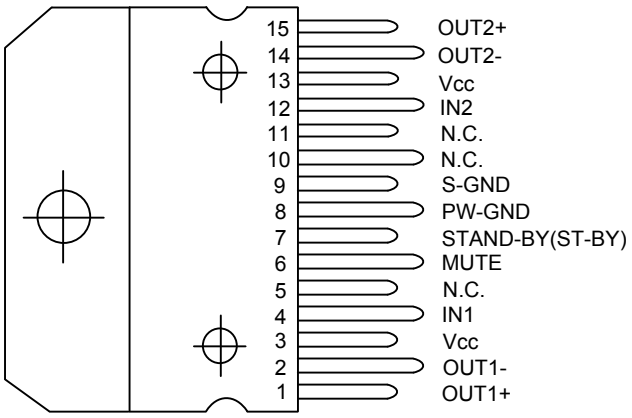
Ordering Number		Package	Packing
Lead Free	Halogen Free		
TDA7266L-J15-A-T	TDA7266G-J15-A-T	HZIP-15A	Tube
TDA7266L-J15-B-T	TDA7266G-J15-B-T	HZIP-15B	Tube
TDA7266L-J15-D-T	TDA7266G-J15-D-T	HZIP-15D	Tube

TDA7266L-J15-A-T
(1)Packing Type
(2)Package Type
(3)Lead Free

(1) T: Tube
(2) J15-A: HZIP-15A, J15-B: HZIP-15B, J15-D: HZIP-15D
(3) L: Lead Free Plating, Blank: Pb/Sn
G: Halogen Free

■ PIN CONFIGURATION

HZIP-15A



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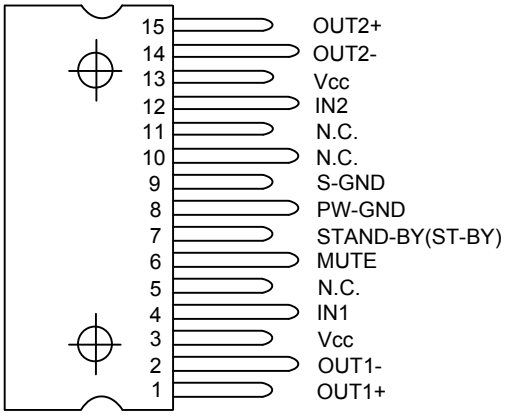
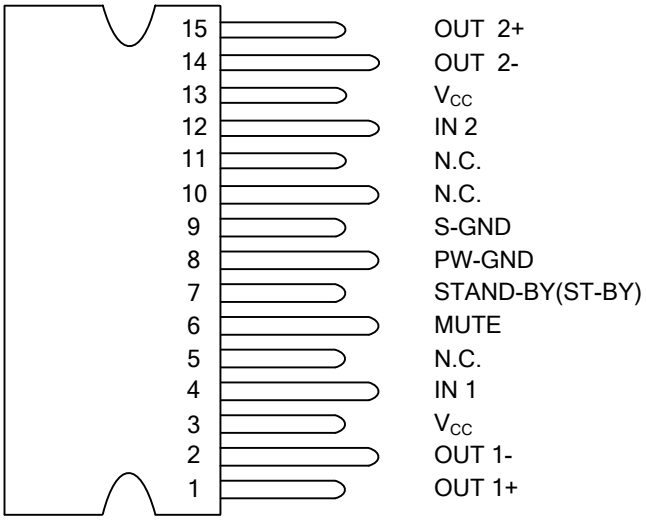
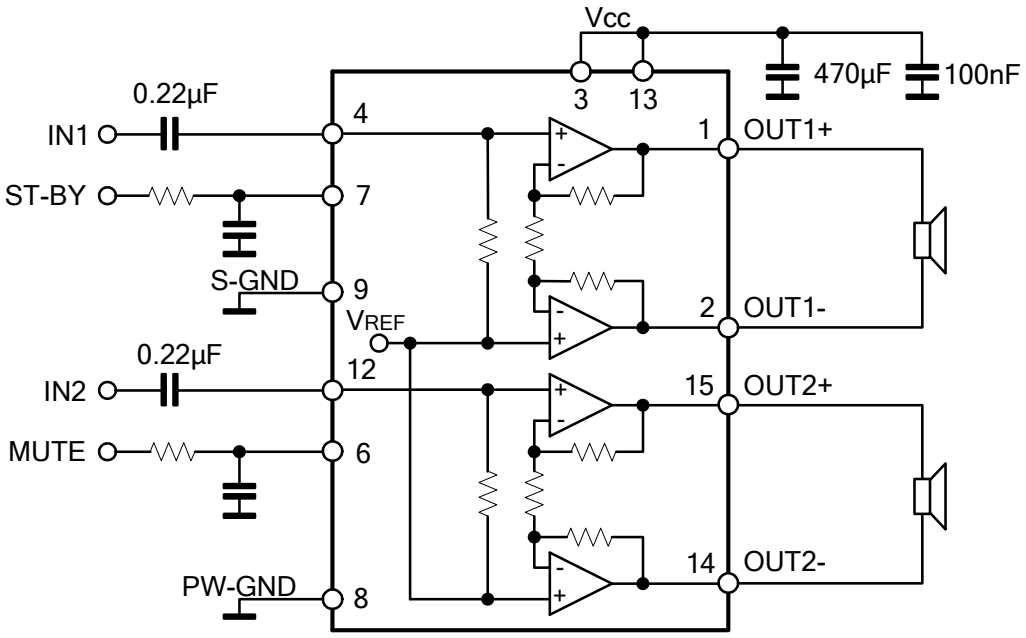


HZIP-15D



■ 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°C)	HZIP-15A / HZIP-15B	P_D	33	W
	HZIP-15D		20	
Junction Temperature		T_J	+125	°C
Operating Junction Temperature		T_J	0 ~ +70	°C
Storage Temperature		T_{STG}	-40 ~ +150	°C

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

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Case	HZIP-15A / HZIP-15B	θ_{JC}	1.4	°C /W
	HZIP-15D		2.5	

■ ELECTRICAL CHARACTERISTICS(V_{CC}=11V, R_L =8Ω, f=1kHz, Ta=25°C, 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 ~ 20kHz		150		μV
Total Quiescent Current	I_Q			48	65	mA
Input Resistance	R_{IN}		25	30		kΩ
Output Power	P_{OUT}	THD=10%	6.3	7		W
Total Harmonic Distortion	THD	P_{OUT}=1W		0.05	0.2	%
		P_{OUT}=0.1~2W, f=100Hz~15kHz			1	%
Crosstalk	C_T		46	60		dB
Closed Loop Voltage Gain	Gv		25	26	27	dB
Voltage Gain Matching	△Gv				0.5	dB
Supply Voltage Rejection	SVR	f=100Hz, V_R=0.5V	40	56		dB
Thermal Threshold	Tt			150		°C
MUTE FUNCTION						
Mute Threshold	VM_{THD}	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
STAND BY FUNCTION						
STAND-BY Threshold	VT_{ST-BY}		0.8	1.3	1.8	V
STAND-BY Current V6=GND	I_{ST-BY}				100	μA

■ 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 mP) 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.

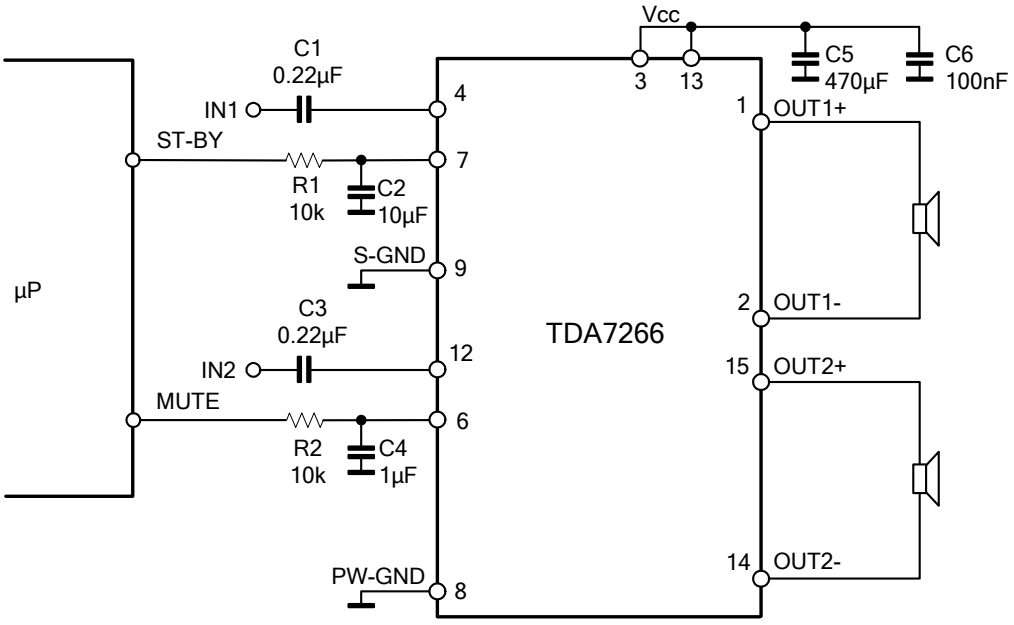


Fig. 1 Microprocessor Application

■ APPLICATION SUGGESTION(Cont.)

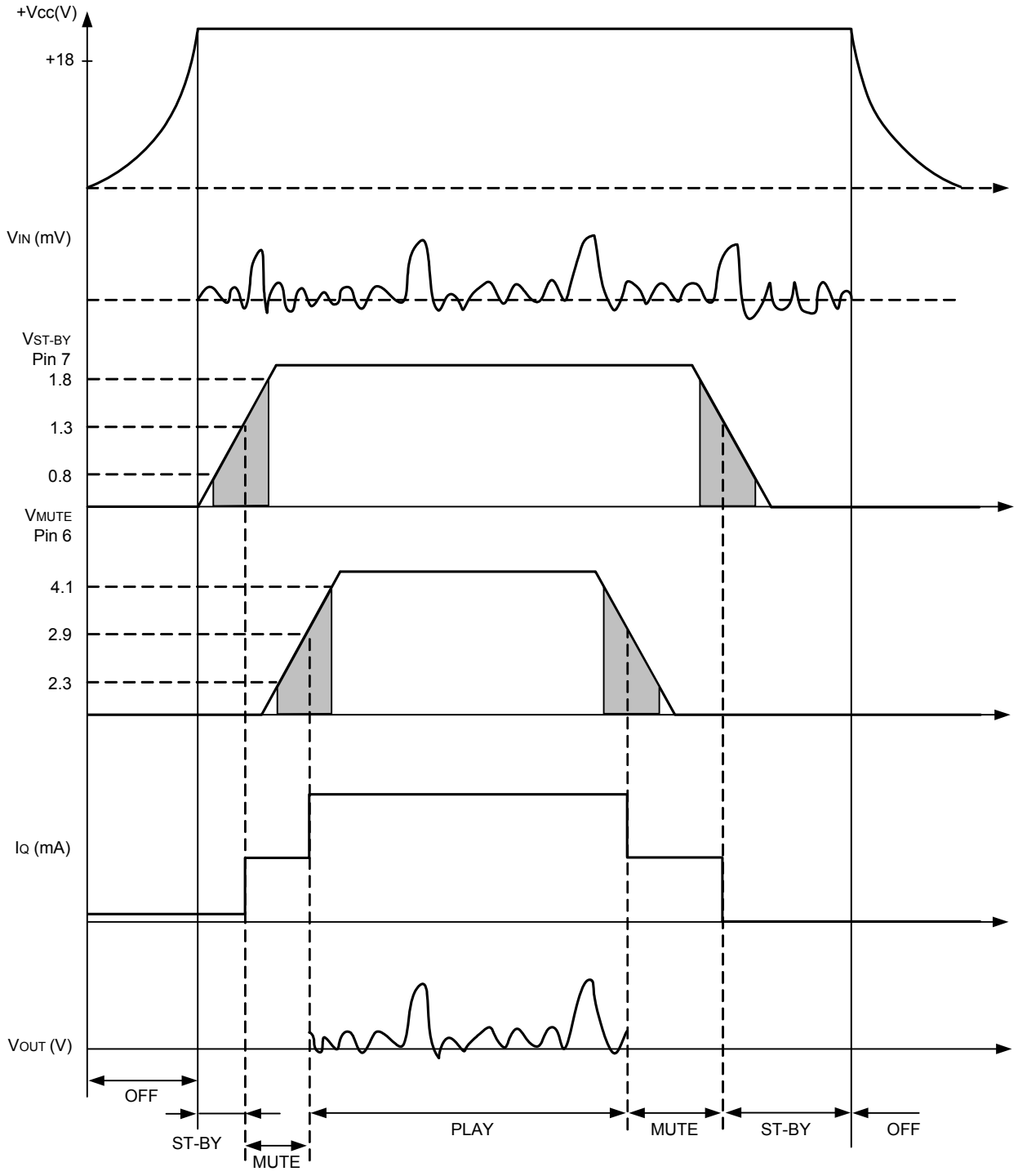


Fig 2 Microprocessor Driving Signals

■ 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.

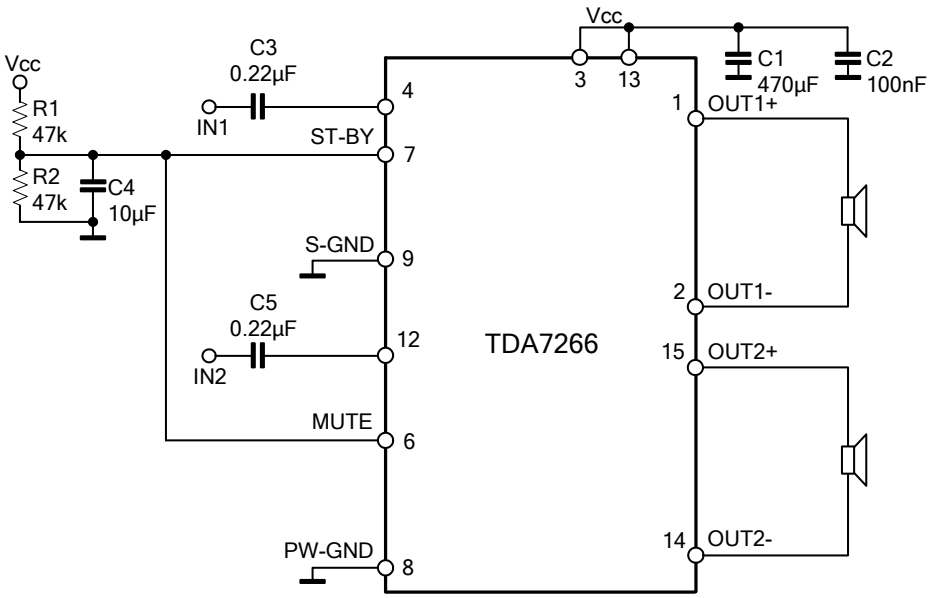
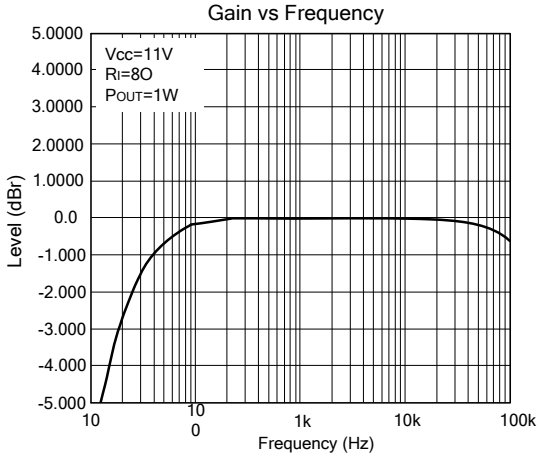


Fig 3 Stand Alone Low Cost Application

■ TYPICAL CHARACTERISTICS

Gain vs Frequency



Quiescent Current vs Supply Voltage