



TDA7297

LINEAR INTEGRATED CIRCUIT

10+10W DUAL BRIDGE AMPLIFIER

■ DESCRIPTION

The UTC **TDA7297** is a dual bridge amplifier, it uses UTC advanced technology to provide customers with wide supply voltage, stand-by function, mute function, thermal overload protection and short circuit protection, etc.

The UTC **TDA7297** is suitable for TV and Portable Radio applications, etc.

■ FEATURES

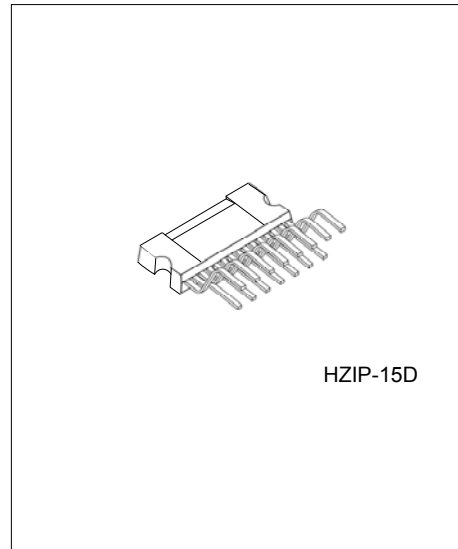
- * St-by and mute functions
- * OTP and short circuit protections
- * Work with a minimum external components
- * Wide supply voltage range (6.5V~18V)

■ ORDERING INFORMATION

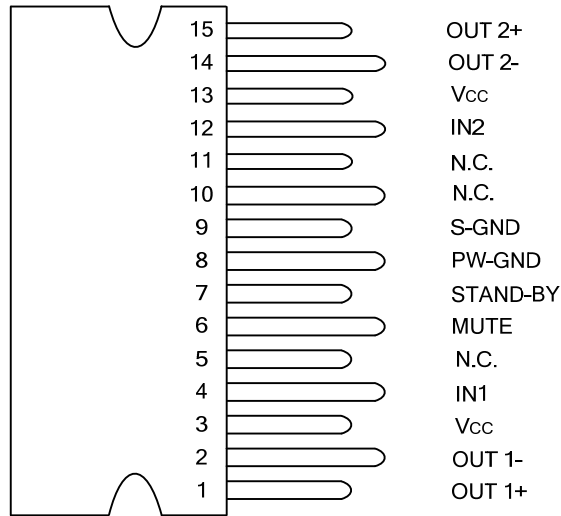
Ordering Number		Package	Packing
Lead Free	Halogen Free		
TDA7297L-J15-D-T	TDA7297G-J15-D-T	HZIP-15D	Tube

Note: xx: Output Voltage, refer to Marking Information.

<p>TDA7297L-J15-D-T</p> <p>(1)Packing Type (2)Package Type (3)Lead Free</p>	<p>(1) T: Tube (2) J15-D: HZIP-15D (3) L: Lead Free, G: Halogen Free</p>
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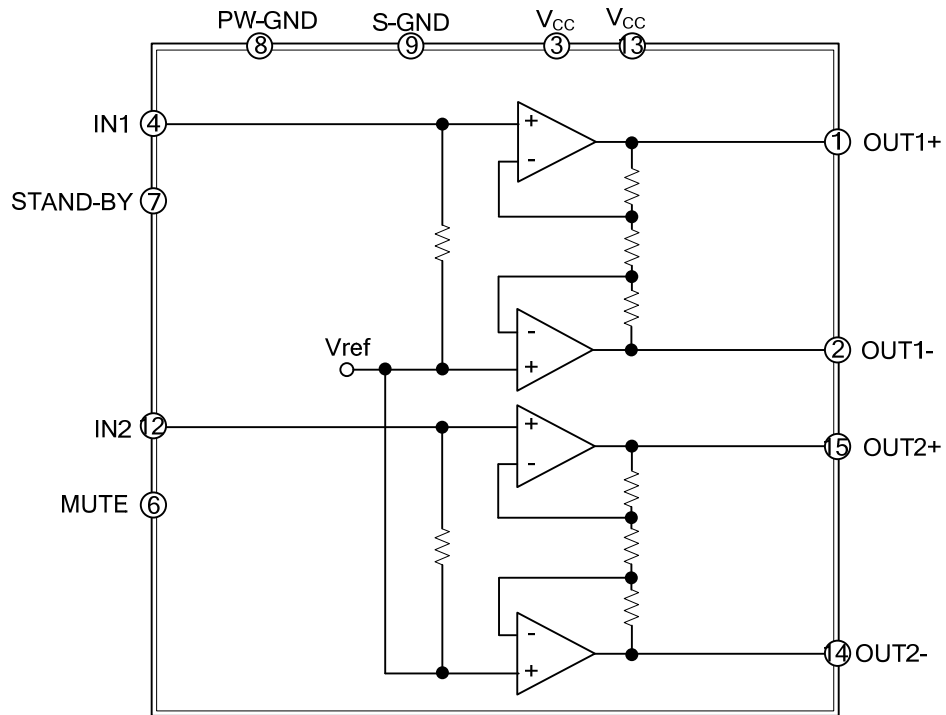
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	OUT1+	Non-Inverting Output of Channel 1
2	OUT1-	Inverting Output of Channel 1
3	V _{cc}	Supply Voltage
4	IN1	Input of Channel 1
5	N.C.	Not Connected
6	MUTE	Mute Function Terminal
7	STAND-BY	Stand-by Function Terminal
8	PW-GND	Power Ground
9	S-GND	Signal Ground
10	N.C.	Not Connected
11	N.C.	Not Connected
12	IN2	Input of Channel 2
13	V _{cc}	Supply Voltage
14	OUT2-	Inverting Output of Channel 2
15	OUT2+	Non-Inverting Output of Channel 2

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_S	20	V
Output Peak Current (Internally Limited)	I_O	2	A
Total Power Dissipation ($T_C=70^\circ\text{C}$)	P_{TOT}	30	W
Operating Temperature	T_{OPR}	0~70	$^\circ\text{C}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40~+150	$^\circ\text{C}$

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

DESCRIPTION	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	48	$^\circ\text{C/W}$
Junction to Case	θ_{JC}	1.8	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS

($V_{CC}=13\text{V}$, $R_L=8\Omega$, $f=1\text{kHz}$, $T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Range	V_{CC}		6.5		18	V
Total Quiescent Current	I_q	$R_L=\infty$		50	65	mA
Output Offset Voltage	V_{OS}				120	mV
Output Power	P_O	THD=10%	8.3	10		W
Total Harmonic Distortion	THD	$P_O=1\text{W}$		0.1	0.3	%
		$P_O=0.1\text{W}\sim 2\text{W}$, $f=100\text{Hz}\sim 15\text{kHz}$			1	%
Supply Voltage Rejection	SVR	$f=100\text{Hz}$ $V_R=0.5\text{V}$	40	56		dB
Crosstalk	CT		46	60		dB
Mute Attenuation	A_{MUTE}		60	80		dB
Thermal Threshold	T_W			150		$^\circ\text{C}$
Closed Loop Voltage Gain	G_V		31	32	33	dB
Voltage Gain Matching	ΔG_V				0.5	dB
Input Resistance	R_i		25	30		k Ω
Mute Threshold	$V_{T_{MUTE}}$	$V_O=-30\text{dB}$	2.3	2.9	4.1	V
ST-BY Threshold	$V_{T_{ST-BY}}$		0.8	1.3	1.8	V
ST-BY Current $V_6=\text{GND}$	I_{ST-BY}				100	μA
Total Output Noise Voltage	e_N	A curve		150		μV
		$f=20\text{Hz}\sim 20\text{kHz}$		220	500	μV

■ APPLICATION SUGGESTION

STAND-BY AND MUTE FUNCTIONS

a. Microprocessor Application

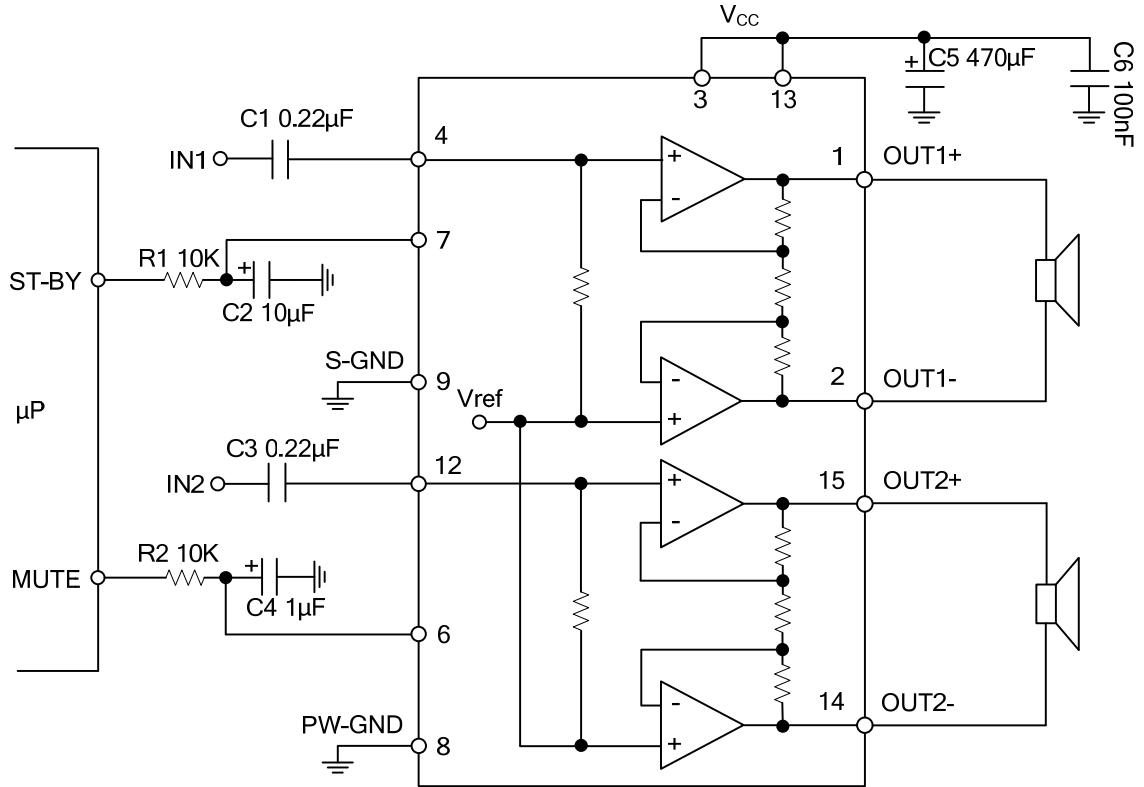


Fig. 1 Microprocessor Application

■ APPLICATION SUGGESTION(Cost.)

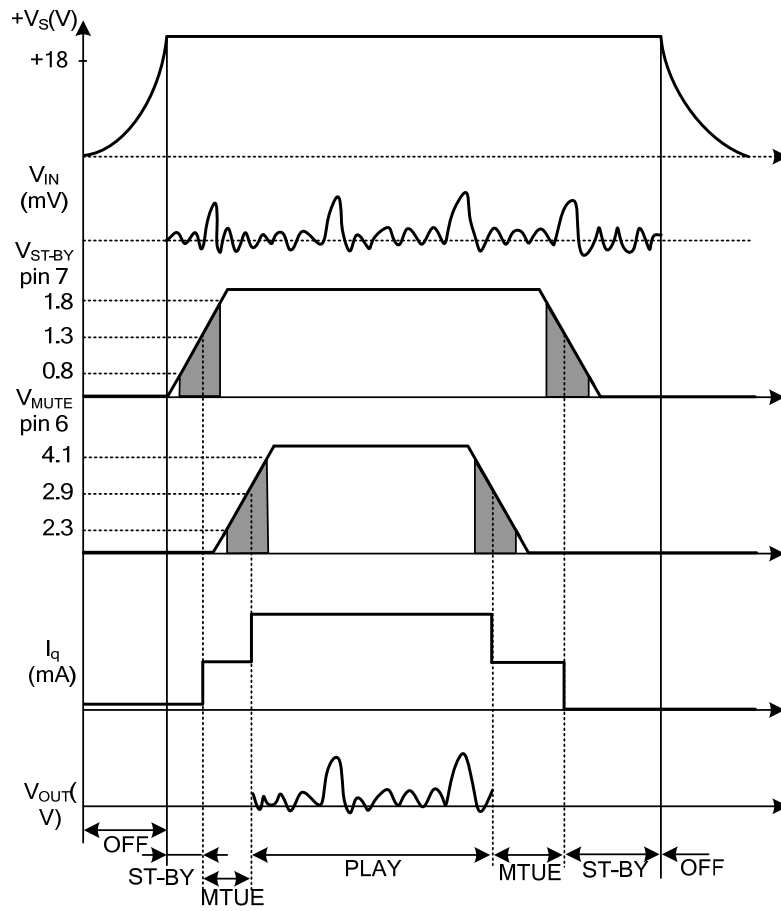


Fig. 2 Microprocessor Driving Signals

■ APPLICATION SUGGESTION(Cost.)

b. Low Cost Application

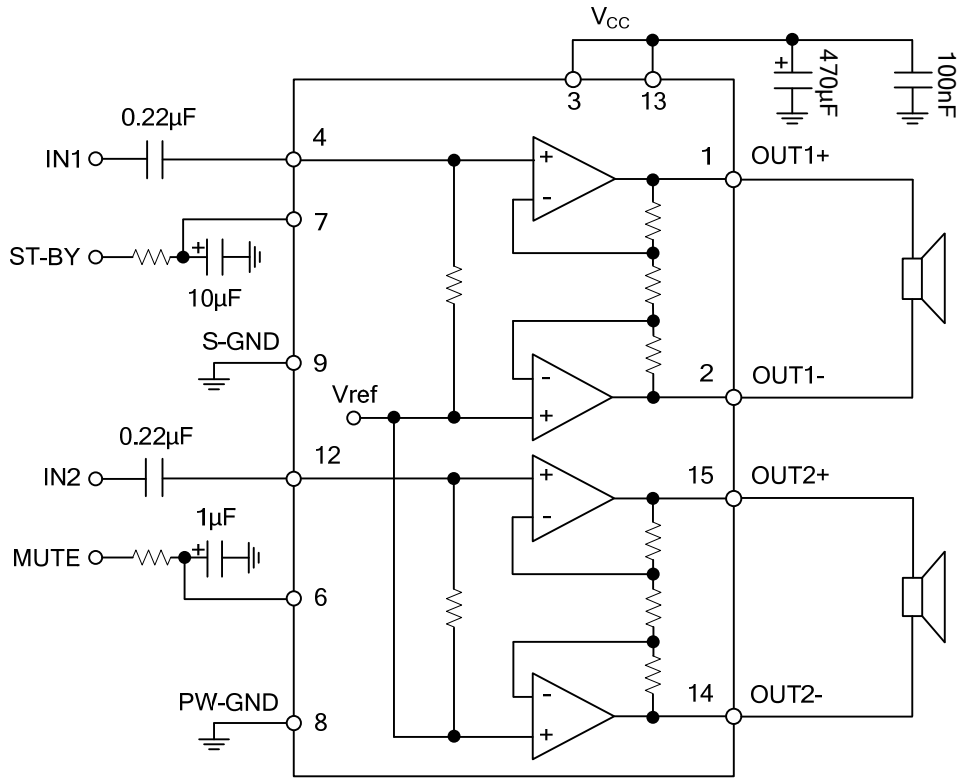
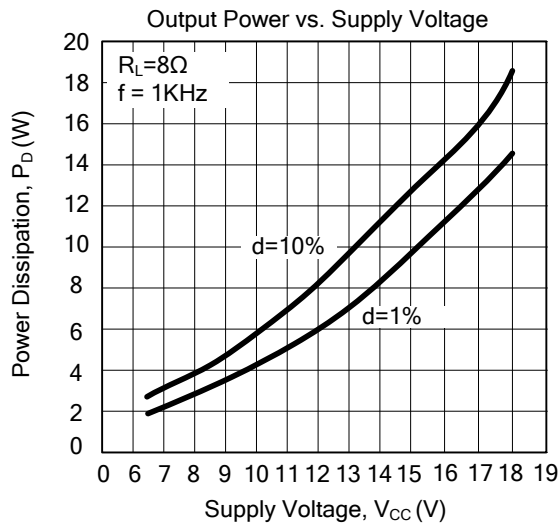
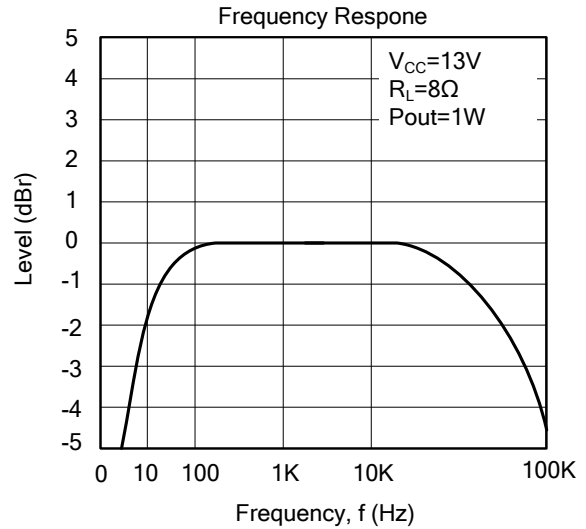
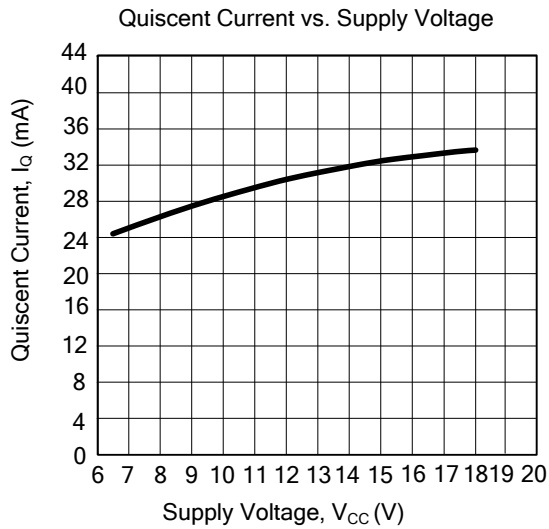


Fig. 3 Stand-alone Low-cost Application

TYPICAL CHARACTERISTICS



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