

NTE1293 Integrated Circuit Dual, Audio Power Amp, 5.8W/Ch

Description:

The NTE1293 is a dual audio power amplifier in a 12-Lead SIP type package specifically designed for car stereo applications. This device provides an output power of 7W/Ch to a 4Ω load with 10% THD at 14.4V power supply.

Features:

- Very Low Number of External Components Required
- Easy Mounting with No Electrical Isolation Between the Package and Heat Sink
- Very Low Transient Noise at Power Switch-On
- No Damage for Reverse Insertion on the PC Board
- Thermal Shut-Down Circuit Included
- Load Dump Protection Circuit Included

Absolute Maximum Ratings: ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Supply Voltage (Surge PW = 200ms), $V_{CC\text{surge}}$ 40V
 Supply Voltage (Quiescent, Note 1), V_{CC1} 25V
 Supply Voltage (Operational), V_{CC2} 18V
 Peak Circuit Current, $I_{CC\text{peak}}$ 4.5A
 package Dissipation, P_D 20W
 Operating Temperature Range (Note 1), T_{opr} -30° to $+75^{\circ}\text{C}$
 Storage Temperature Range, T_{stg} -55° to $+150^{\circ}\text{C}$

Note 1. Using an aluminum heat sink, $R_{thCA} = 6^{\circ}\text{C/W}$.

Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 13.2\text{V}$, $f = 1\text{kHz}$, $R_L = 4\Omega$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_{CC}	$v_{in} = 0$	30	80	180	mA
Output Power	P_O	THD = 10%, $V_{CC} = 14.4\text{V}$	–	7.0	–	W
		THD = 10%, $V_{CC} = 13.2\text{V}$	5.0	5.8	–	W
		THD = 10%, $V_{CC} = 14.4\text{V}$, $R_L = 2\Omega$	–	8.5	–	W
Total Harmonic Distortion	THD	$P_O = 0.5\text{W}$	–	0.3	1.0	%
		$P_O = 2\text{W}$, $R_L = 2\Omega$	–	0.4	–	%
Voltage Gain	A_V	$P_O = 0.5\text{W}$	51	54	58	dB
Channel Balance	ΔA_V	$P_O = 0.5\text{W}$	–	–	± 1.5	dB
Crosstalk	CT	$f = 1\text{kHz}$, other channel $R_G = 0$	30	45	–	dB
Output Noise Level	v_n	$R_G = 10\text{k}\Omega$	–	1.4	4.0	mV_{rms}

Pin Connection Diagram
(Front View)

