ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

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°C unless otherwise specified)

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

Note 1. Using an aluminum heat sink, R_{thCA} = 6°C/W.

Electrical Characteristics: (T_A = +25°C, V_{CC} = 13.2V, f = 1kHz, R_L = 4Ω 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} = 14.4V	–	7.0	–	W
		THD = 10%, V_{CC} = 13.2V	5.0	5.8	–	W
		THD = 10%, V_{CC} = 14.4V, R_L = 2Ω	–	8.5	–	W
Total Harmonic Distortion	THD	P_O = 0.5W	–	0.3	1.0	%
		P_O = 2W, R_L = 2Ω	–	0.4	–	%
Voltage Gain	A_V	P_O = 0.5W	51	54	58	dB
Channel Balance	ΔA_V	P_O = 0.5W	–	–	±1.5	dB
Crosstalk	CT	f = 1kHz, other channel R_G = 0	30	45	–	dB
Output Noise Level	v_n	R_G = 10kΩ	–	1.4	4.0	mV_{rms}

Pin Connection Diagram
(Front View)