ELECTRONICS, INC.
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NTE1285 & NTE1286
Integrated Circuit
Audio Power Amplifier, 5.8W

Description:

The NTE1285 and NTE1286 are audio power amplifiers in a 7–Lead SIP type package designed especially for car radio and car stereo applications. These devices are encapsulated in newly developed small packages featuring low thermal resistance, providing easy design for 2Ω. At 14.4V the devices give output power of 7W with R_L = 4Ω and 11W with R_L = 2Ω.

Features:

- High Output Power
- Low Transient Noise at Power Supplu Switch ON
- Mirror Image Pin Configurations
- Protection Circuits are Provided for the Following:
  - Load Dump Protection
  - Thermal Shut–Down Protection
  - Overvoltage Protection
  - Output Terminal Short–Circuit Protection

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_{CC}1 . . . . . 25V
Supply Voltage (Operational), V_{CC}2 . . . . . 18V
Peak Circuit Current, I_{CC}peak 4.5A
Packag Dissipation, P_D 12W
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 100mm x 100mm x 1mm.

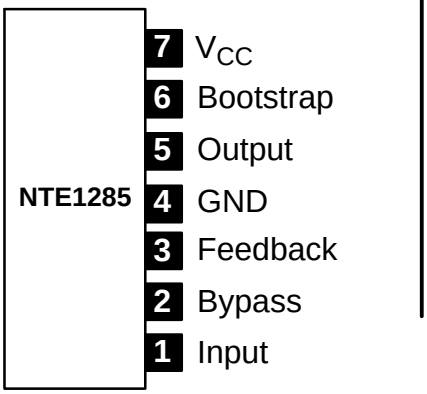
Recommended Operating Conditions: (T_A = +25°C unless otherwise specified)

Supply Voltage Range, V_{CC} . . . . . 9.5V to 16V
Load Impedance, R_L . . . . . 4Ω to 2Ω

Electrical Characteristics: (T_A = +25°C, f = 1kHz, R_L = 4Ω unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_{CC}	υ_{in} = 0, V_{CC} = 13.2V	23	45	80	mA
Output Power	P_O	R_L = 4Ω, THD = 10%, V_{CC} = 13.2V	5.0	5.8	–	W
		R_L = 4Ω, THD = 10%, V_{CC} = 14.4V	–	7.0	–	W
		R_L = 2Ω, THD = 10%, V_{CC} = 13.2V	–	9.2	–	W
		R_L = 2Ω, THD = 10%, V_{CC} = 14.4V	–	11.0	–	W
Total Harmonic Distortion	THD	P_O = 0.5W	–	0.3	1.0	%
Voltage Gain	$A\upsilon$	P_O = 0.5W	51.0	53.5	56.0	dB
Output Noise Level	υ_n	R_g = 10kΩ	–	1.4	4.0	mV_{rms}

Pin Connection Diagram
(Front View)



Pin Connection Diagram
(Front View)