



ELECTRONICS, INC.

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## NTE1155 Integrated Circuit Audio Power Amplifier, 5.8W

### Description:

The NTE1155 is an integrated circuit in a 10-Lead SIP type package designed for use as an audio power amplifier for car radio and car stereo applications

### Features:

- Output Power:
  - $P_{OUT} = 5.8W$  (Typ) at  $V_{CC} = 13.2V$ ,  $R_L = 4\Omega$ , THD = 10%
  - $P_{OUT} = 9.2W$  (Typ) at  $V_{CC} = 13.2V$ ,  $R_L = 2\Omega$ , THD = 10%
- Maximum Output Power:
  - $P_{OM} = 9.5W$  (Typ) at  $V_{CC} = 13.2V$ ,  $R_L = 4\Omega$
- Low Distortion:
  - THD = 0.15% at  $P_{OUT} = 1W$ ,  $G_V = 55dB$
  - THD = 0.07% at  $P_{OUT} = 1W$ ,  $G_V = 44dB$
- Wide Operating Supply Voltage Range:  $V_{CC} = 9V$  to  $18V$
- Low Noise
- Current Limiting for Short-Circuit Protection
- Built-In Thermal Shut-Down Circuit
- Built-In Surge Voltage protection Circuit

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

Operating Supply Voltage (Note 1), $V_{CC}$ .....	18V
Quiescent Supply Voltage, $V_{CCQ}$ .....	25V
Output Current (Peak), $I_{O(Peak)}$ .....	4.5A
Power Dissipation, $P_D$ .....	7.5W
Operating Temperature Range, $T_{opr}$ .....	$-20^\circ$ to $+75^\circ C$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+150^\circ C$

Note 1. Minimum Operating Voltage is 9V.

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 12.5\text{V}$ ,  $R_L = 4\Omega$ ,  $R_g = 600\Omega$ ,  $R_f = 82\Omega$ ,  $f = 1\text{kHz}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	$I_{CCQ}$		-	-	60	mA
		$V_{CC} = 18\text{V}$	-	-	80	mA
Output Power	$P_O$	THD = 10%	4.5	5.0	-	W
		$V_{CC} = 13.2\text{V}$ , THD = 10%	-	5.8	-	W
		$V_{CC} = 13.2\text{V}$ , $R_L = 2\Omega$ , THD = 10%	-	9.2	-	W
Maximum Output Power	$P_{OM}$	$V_{CC} = 13.2\text{V}$	-	9.5	-	W
Total Harmonic Distortion	THD	$P_{OUT} = 1\text{W}$	-	0.15	1.0	%
		$P_{OUT} = 100\text{mW}$	-	0.2	1.0	%
		$P_{OUT} = 1\text{W}$ , $R_L = 2\Omega$	-	0.25	1.0	%
Voltage Gain	$G_V$	$V_{IN} = 2.45\text{mV}_{rms}$	52	55	58	dB
Input Resistance	$R_{IN}$	$V_{OUT} = 2\text{V}_{rms}$	30	40	-	k $\Omega$
Output Noise Voltage	$V_{NO}$	$R_g = 10\text{k}\Omega$ , BW = 50 to 20kHz	-	-	3.5	mV

**Pin Connection Diagram**  
(Front View)

