



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° to +75°C
Storage Temperature Range, T_{stg}	-55° to +150°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}	$V_{OUT} = 2V_{rms}$	30	40	-	k Ω
Output Noise Voltage	V_{NO}	$R_g = 10\text{k}\Omega$, BW = 50 to 20kHz	-	-	3.5	mV

Pin Connection Diagram
(Front View)

