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## NTE7184 Integrated Circuit 1.6W Audio Amplifier for Portable Radios and Cassette Players

**Description:**

The NTE7184 is a monolithic integrated circuit in an 8-Lead Mini DIP type package. This device is intended for use as a class AB power amplifier with a wide range of supply voltage in portable radios, cassette recorders and players.

**Features:**

- Operating Voltage 1.8V to 15V
- Low Quiescent Current
- High Power Capability
- Low Crossover Distortion
- Soft Clipping

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

Supply Voltage, $V_S$ .....	16V
Total Power Dissipation, $P_{tot}$	
$T_A = +50^\circ\text{C}$ .....	1.25W
$T_C = +70^\circ\text{C}$ .....	4W
Output Peak Current, $I_O$ .....	1A
Storage Temperature Range, $T_{stg}$ .....	$-40^\circ$ to $+150^\circ\text{C}$
Operating Junction Temperature Range, $T_J$ .....	$-40^\circ$ to $+150^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient, $R_{thJA}$ .....	$80^\circ\text{C/W}$
Thermal Resistance, Junction-to-Pins, $R_{thJPINS}$ .....	$15^\circ\text{C/W}$

**Electrical Characteristics:** ( $V_S = 6V$ ,  $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	$V_S$		1.8	–	15	V
Quiescent Output Voltage	$V_O$	$V_S = 6V$	–	2.7	–	V
		$V_S = 3V$	–	1.2	–	V
Quiescent Drain Current	$I_d$		–	3.6	9.0	mA
Input Bias Current	$I_b$		–	100	–	nA

**Electrical Characteristics Cont'd:** ( $V_S = 6V$ ,  $T_A = +25^\circ C$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Output Power	$P_o$	$d = 10\%$ , $f = 1kHz$	$V_S = 12V, R_L = 8\Omega$	-	1.8	-	W
			$V_S = 9V, R_L = 4\Omega$	-	1.6	-	W
			$V_S = 6V, R_L = 8\Omega$	-	0.4	-	W
			$V_S = 6V, R_L = 4\Omega$	-	0.7	-	W
			$V_S = 3V, R_L = 4\Omega$	-	110	-	W
			$V_S = 3V, R_L = 8\Omega$	-	70	-	mW
Distortion	$d$	$P_o = 0.2W, f = 1 kHz, R_L = 8\Omega$	-	0.3	-	%	
Closed Loop Voltage Gain	$G_V$		-	38	-	dB	
Input Resistance	$R_{in}$	$f = 1kHz$	100	-	-	k $\Omega$	
Total Input Noise	$e_N$	$R_S = 10k\Omega$	B = Curve A	-	2	-	$\mu V$
			B = 22Hz to 22kHz	-	3	-	$\mu V$
Supply Voltage Rejection	SVR	$f = 100Hz, R_G = 10k\Omega$	24	33	-	dB	

**Pin Connection Diagram**

