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

Absloute Maximum Ratings: (T_A = +25°C unless otherwise specified)

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

Electrical Characteristics: (V_S = 6V, T_A = +25°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°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 = 8Ω	–	1.8	–	W
			V_S = 9V, R_L = 4Ω	–	1.6	–	W
			V_S = 6V, R_L = 8Ω	–	0.4	–	W
			V_S = 6V, R_L = 4Ω	–	0.7	–	W
			V_S = 3V, R_L = 4Ω	–	110	–	W
			V_S = 3V, R_L = 8Ω	–	70	–	mW
Distortion	d	P_o = 0.2W, f = 1 kHz, R_L = 8Ω		–	0.3	–	%
Closed Loop Voltage Gain	G_V			–	38	–	dB
Input Resistance	R_{in}	f = 1kHz		100	–	–	kΩ
Total Input Noise	e_N	R_s = 10kΩ	B = Curve A	–	2	–	µV
			B = 22Hz to 22kHz	–	3	–	µV
Supply Voltage Rejection	SVR	f = 100Hz, R_g = 10kΩ		24	33	–	dB

Pin Connection Diagram

+V_S 1
Output 2
Input – 3
Input + 4
8
7
6 } GND
5

8   5

.280
(7.1)
Max

1   4

.386 (9.8)
Max

.189
(4.8)
Max

.100 (2.54)

.300 (7.62)

.130 (3.3)

.300 (7.62)