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NTE7207 Integrated Circuit High Output Dual Power Amplifier

Description:

The NTE7207 is a 6V to 15V compatible dual power amplifier in a 15-Lead SIP type package designed for use in radio cassette players. This device is equipped with standby switching functions for excellent total harmonic distortion and other basic characteristics.

Features:

- High Output:
 $P_{OUT} = 2.8W$ ($V_{CC} = 9V, R_L = 3\Omega, THD = 10\%$)
 $P_{OUT} = 5.0W$ ($V_{CC} = 12V, R_L = 3\Omega, THD = 10\%$)
- Excellent Audio Quality:
 $THD = 0.1\%$ ($f = 1kHz, P_O = 0.5W$)
 $V_{NO} = 0.3mV_{rms}$ ($R_g = 10k\Omega$)
 $RR = 55dB$ ($f_{RR} = 100Hz$)
- Wide Supply Voltage Operating Range:
 $(V_{CC} = 6V \text{ to } 15V)$
- Switching Noise (“POP” Noise) Generated when the Power is Switched ON and OFF is Low
- Ripple Mixing when Motor Starts has been Prevented
- Built-In Thermal Shutdown Circuit
- Built-In Standby Switch. Output is not Influenced by the Standby Pin Voltage
- Soft Clipping

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

Power Supply Voltage (Note 1), V_{CC}	20V
Power Dissipation (Note 2), P_d	15W
Operating Temperature Range, T_{opr}	-20° to +75°C
Storage Temperature Range, T_{stg}	-55° to +150°C

Note 1. Must be within standby values.
 Note 2. $T_A = +75^\circ C$ (when using infinite heatsink).

Recommended Operating Conditions: ($T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply Voltage	V_{CC}		6	-	15	V

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 9\text{V}$, $R_L = 3\Omega$, $R_F = 120\Omega$, $R_g = 600\Omega$, $f = 1\text{kHz}$, OTL Mode, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_O	$V_{IN} = 0V_{rms}$	-	22	45	mA
Rated Output Voltage	P_{OUT}	THD = 10%	2.2	2.8	-	W
		THD = 10%, $V_{CC} = 12\text{V}$	4.0	5.0	-	W
Closed-Loop Voltage Gain	G_{VC}		43	45	47	dB
Output Noise Voltage	V_{NO}	$R_g = 10\text{k}\Omega$, DIN Audio	-	0.3	1.0	mV_{rms}
Total Harmonic Distortion	THD	$P_{OUT} = 0.5\text{W}$	-	0.1	1.0	%
Ripple Rejection	RR	$f_{RR} = 100\text{Hz}$, $V_{RR} = 10\text{dBm}$	42	55	-	dB
Crosstalk	CT	$V_o = 0\text{dBm}$	48	65	-	dB
Circuit Current (With Standby Switch OFF)	I_{OFF}		-	0	20	μA
Standby Pin Current When ON	I_{SIN}	$V_{STBY} = V_{CC}$	-	0.15	0.4	mA
Standby Pin Control Voltage Activated	V_{STH}		3.5	-	-	V
	Not Activated	V_{STL}	-	-	1.2	V

Pin Connection Diagram
(Front View)



