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RoHS 2002/95/EC

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 = 3Ω, THD = 10%)
  P_{OUT} = 5.0W (V_{CC} = 12V, R_L = 3Ω, THD = 10%)
- Excellent Audio Quality:
  THD = 0.1% (f = 1kHz, P_O = 0.5W)
  V_{NO} = 0.3mV_{rms} (R_g = 10kΩ)
  RR = 55dB (f_{RR} = 100Hz)
- Wide Supply Voltage Operating Range:
  (V_{CC} = 6V 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°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
Stoage Temperature Range, T_{stg} . . . . . –55° to +150°C

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

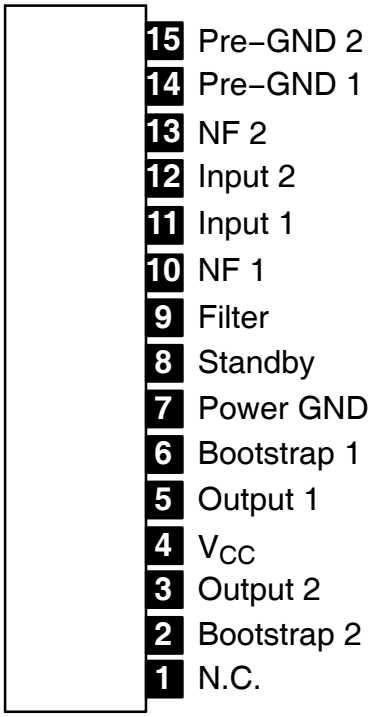
Recommended Operating Conditions: (T_A = +25°C unless otherwise specified)

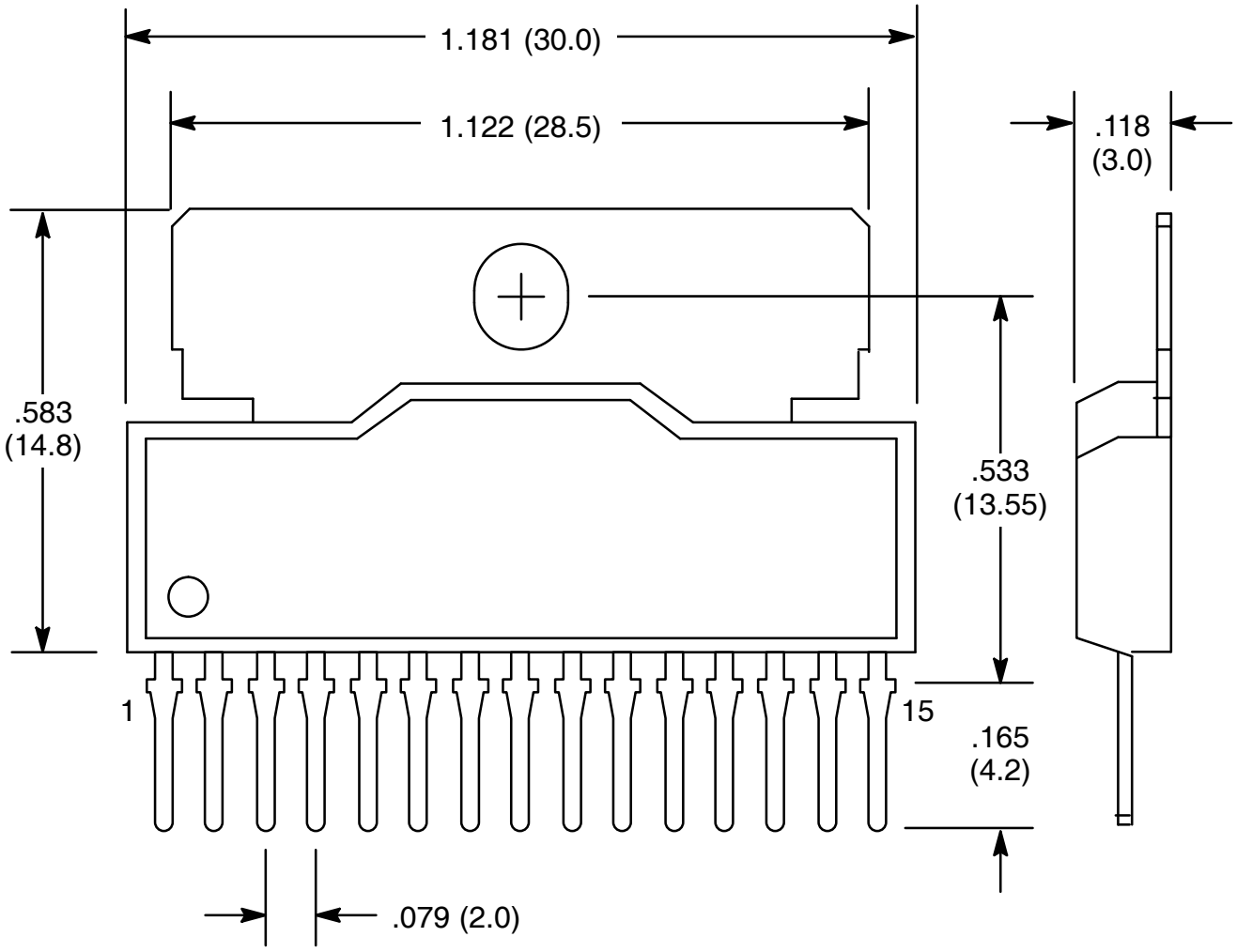
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply Voltage	V_{CC}		6	–	15	V

Electrical Characteristics: (T_A = +25°C, V_{CC} = 9V, R_L = 3Ω, R_F = 120Ω, R_g = 600Ω, f = 1kHz, 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} = 12V	4.0	5.0	–	W
Closed−Loop Voltage Gain	G_{VC}		43	45	47	dB
Output Noise Voltage	V_{NO}	R_g = 10kΩ, DIN Audio	–	0.3	1.0	mV_{rms}
Total Harmonic Distortion	THD	P_{OUT} = 0.5W	–	0.1	1.0	%
Ripple Rejection	RR	f_{RR} = 100Hz, V_{RR} = 10dBm	42	55	–	dB
Crosstalk	CT	V_o = 0dBm	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)




1.181 (30.0)
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.118
(3.0)
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(14.8)
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(13.55)
1
15
.165
(4.2)
.079 (2.0)