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NTE1832 Integrated Circuit BTL Audio Power Amplifier, 12W

Description:

The NTE1832 is an audio power amplifier designed for use in consumer applications. This IC uses a BTL system in which output coupling capacitors are not necessary and 12W output can be obtained. The NTE1832 is available in a 7-Lead SIP style package which greatly simplifies the construction of a power amplifier both in design and assembly.

Features:

- Suitable for High Performance Car-Audio Power Amplifier.
- High Power: $P_{OUT} = 12W$ Typ ($V_{CC} = 13.2V$, $f = 1kHz$, THD = 10%, $R_L = 4\Omega$)
- Built in Protector Circuit
Thermal Shut Down, Over Voltage Protector ($V_{CC} = 24V$ Typ)
ASO Protector (R_L Short, Out to GND, Out to V_{CC})
- Operating Supply Voltage Range: $V_{CC} = 9V$ to $18V$

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

Peak Supply Voltage (0.2 sec), $V_{CCsurge}$	45V
DC Supply Voltage, V_{CCDC}	25V
Operating Supply Voltage, V_{CCopr}	18V
Peak Output Current, I_{Opeak}	4.5A
Power Dissipation, P_D	15W
Operating Temperature Range, T_{opr}	-30° to $+85^\circ C$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ C$

Electrical Characteristics: ($V_{CC} = 13.2V$, $R_L = 4\Omega$, $f = 1kHz$, $T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_{CCQ}	$V_{IN} = 0$	–	65	110	mA
Output Power	P_{OUT}	THD = 10%	10	12	–	W
Total Harmonic Distortion	THD	$P_{OUT} = 5W$	–	0.4	1	%
Voltage Gain	G_V	$R_f = 0\Omega$	51	53	55	dB

Electrical Characteristics (Cont'd): ($V_{CC} = 13.2V$, $R_L = 4\Omega$, $f = 1kHz$, $T_A = +25^{\circ}C$ unless other wise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Noise Voltage	V_{NO}	$R_g = 10k\Omega$, BW = 20Hz to 20kHz	–	0.9	2.0	mV_{rms}
Ripple Rejection Ratio	R.R.	$f_{ripple} = 100Hz$, $R_g = 600\Omega$	40	50	–	dB
Input Resistance	R_{IN}	$f = 1kHz$	–	30	–	$k\Omega$
Output Offset Voltage	V_{offset}	$V_{IN} = 0$	–	0	0.3	V

Typical DC Voltage of Each Terminal: ($V_{CC} = 13.2V$, $T_A = 25^{\circ}C$)

Terminal No.	1	2	3	4	5	6	7
DC Voltage (V)	5.4	5.4	5.4	GND	6.6	V_{CC}	6.6



