

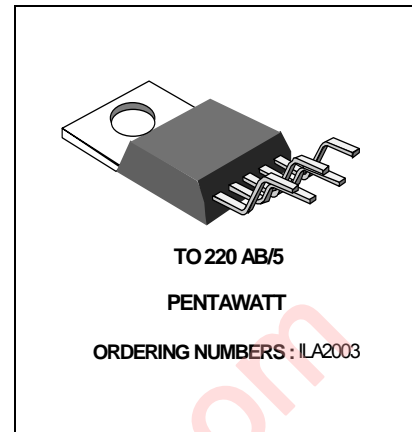
# 10W AUDIO AMPLIFIER

## DESCRIPTION

The main features of ILA2003, are very low number of external components, easy of assembly, space and cost saving.

The device provides a high output current capability (up to 3.5A), very low harmonic and cross-over distortion.

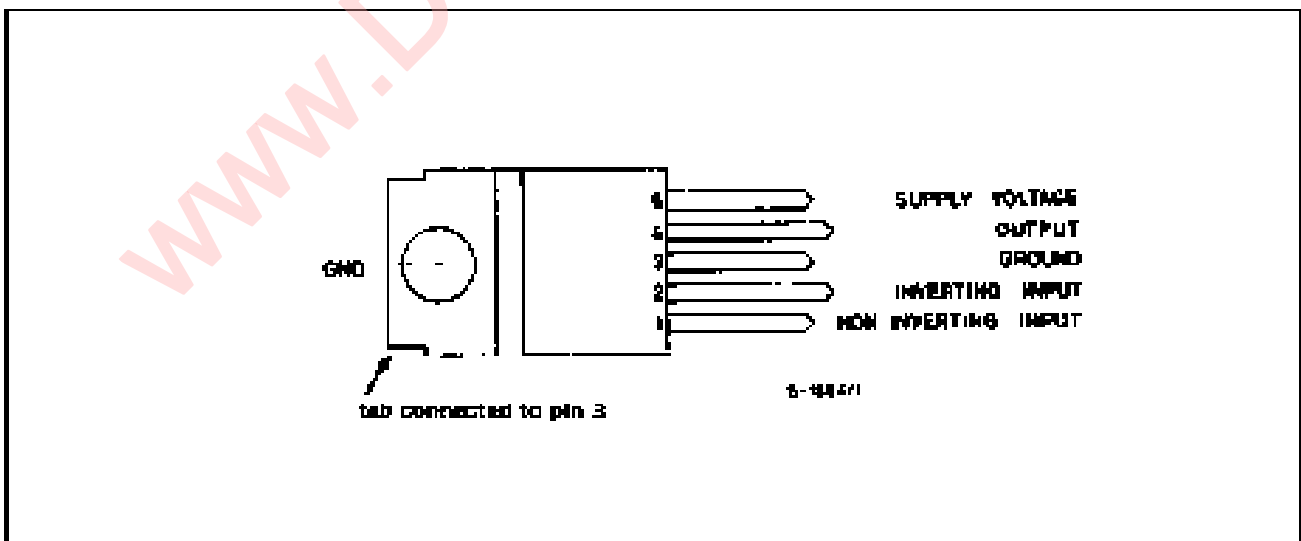
Completely safe operation is guaranteed due to protection against DC and AC short circuit between all pins and ground, thermal over-range, load dump voltage up to 40V and open ground.



## ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
Vs	Peak supply voltage (50 ms)	40	V
Vs	DC supply voltage	28	V
Vs	Operating supply voltage	18	V
Io	Output peak current (repetitive)	3.5	A
Io	Output peak current (non repetitive)	4.5	A
Ptot	Power dissipation at Tcase =90°C	20	W
Tstg,Tj	Storage and junction temperature	-40 to 150	°C

## PIN CONNECTION



**THERMAL DATA**

Symbol	Parameter	Value	Unit
Rth-j-case	Thermal resistance junction-case	max 3	°C/W

**ELECTRICAL CHARACTERISTICS** ( $V_s = 14.4V$ ,  $T_{amb} = 25\text{ °C}$  unless otherwise specified)

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
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**DC CHARACTERISTICS**

Vs	Supply voltage		8		18	V
Vo	Quiescent output voltage (pin 4)		6.1	6.9	7.7	V
Id	Quiescent drain current (pin 5)			44	50	mA

**AC CHARACTERISTICS**

Po	Output power	d = 10% f = 1 kHz RL = 4Ω RL = 2Ω RL = 3.2Ω RL = 1.6Ω	5.5 9	6 10 7.5 12		W W W W
Vi(rms)	Input saturation voltage		300			mV
Vi	Input sensitivity	f = 1 kHz Po = 0.5W Po = 6W Po = 0.5W Po 10W RL = 4Ω RL = 4Ω RL = 2Ω RL = 2Ω		14 55 10 50		mV mV mV mV
B	Frequency response ( -3 dB)	Po = 1W RL = 4Ω	40 to 15000			Hz
d	Distortion	f = 1 kHz Po = 0.05 to 4.5W Po = 0.05 to 7.5W RL = 4Ω RL = 2Ω		0,15 0,15		% %
Ri	Input resistance (pin1)	f = 1 kHz	70	150		kΩ
Gv	Voltage gain (open loop)	f = 1 kHz f = 10 kHz		80 60		dB dB
Gv	Voltage gain (closed loop)	f = 1 kHz RL = 4Ω	39,3	40	40,3	dB
eN	Input noise voltage			1	5	μV
iN	Input noise current			60	200	pA
h	Efficiency	f = 1 kHz Po = 6W Po 10W RL = 4Ω RL = 2Ω		69 65		% %
SVR	Supply voltage rejection	f = 100 Hz Vripple = 0.5V Rg = 10 kΩ RL = 4 Ω	30	36		dB

(0) Filter with noise bandwidth: 22 Hz to 22 kHz

## TO-220 AB/5

