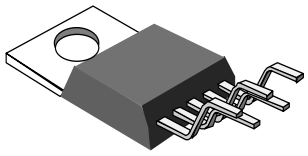
10W AUDIO AMPLIFIER



TO 220 AB/5

PENTAWATT

ORDERING NUMBERS : ILA2003

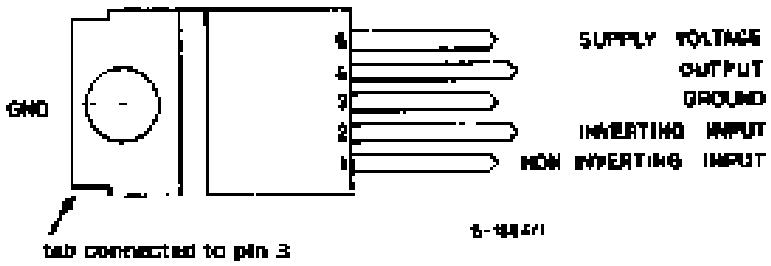
DESCRIPTION

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 °C unless otherwise specified)

Symbol	Parameter	Test conditions	Min.	Typ.	Max.	Unit
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 RL =4Ω Po =6W RL =4Ω Po = 0.5W RL =2Ω Po 10W 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 to4.5W RL =4Ω Po = 0.05 to7.5W 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 RL =4Ω Po 10W 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

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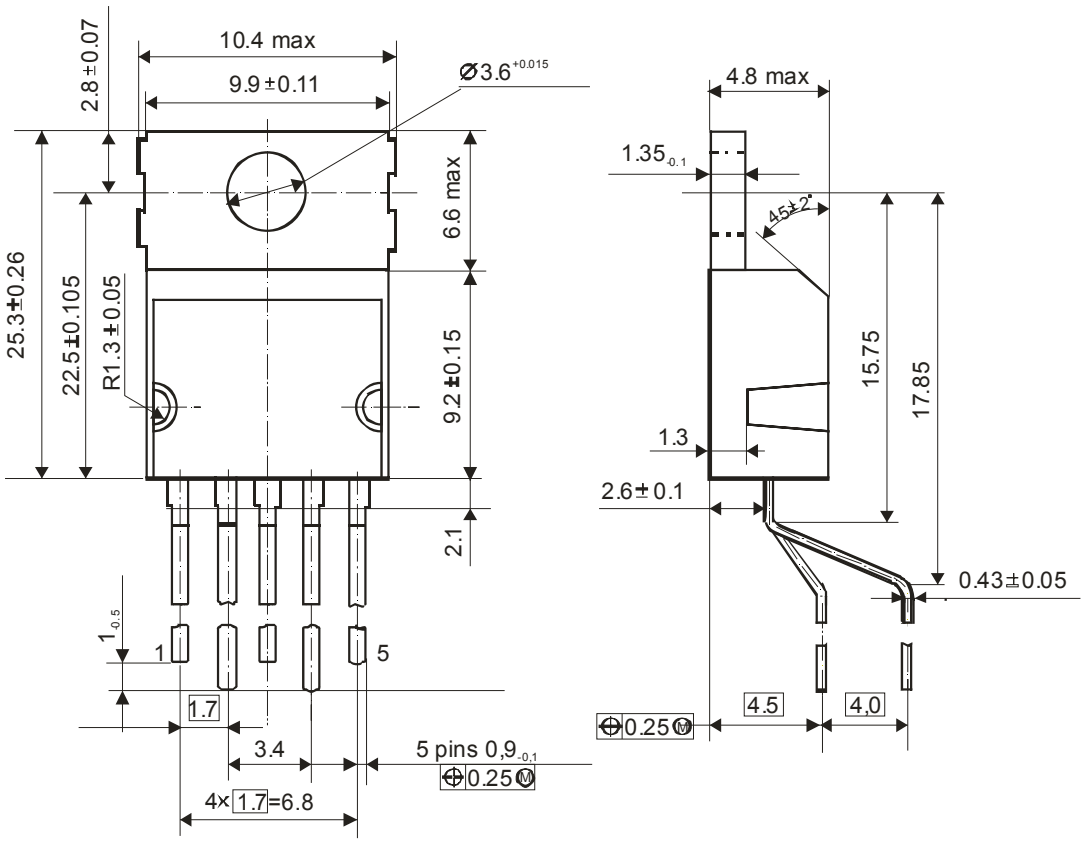
10.4 max
9.9 ±0.11
Ø3.6 +0.015
2.8 ±0.07
6.6 max
25.3±0.26
22.5±0.105
R1.3 ±0.05
9.2 ±0.15
2.1
1 -0.5
1
5
1.7
3.4
4×1.7=6.8
5 pins 0,9 -0,1
0.25 M
4.8 max
1.35 -0.1
45±2°
15.75
17.85
1.3
2.6± 0.1
0.43±0.05
4.5
4,0
0.25 M