ILA7052

MONO OUTPUT AMPLIFIER

GENERAL DESCRIPTION

The ILA7052 is a mono output amplifier in a 8-lead dual-in-line (DIL) plastic package. The device is designed for battery-fed portable audio applications.

Features:

- No external components
- No switch-on or switch-off clicks
- Good overall stability
- Low power consumption
- No external heatsink required
- Short-circuit proof

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Vp	Supply voltage range		3	6	18	V
Itot	Total quiescent current	$R_L=\infty$	-	4	8	mA
Gv	Voltage gain		38	39	40	dB
Po	Output power	THD = 10%; 8 Q	-	1,2	-	W
THD	Total harmonic distortion	Po=0,1W	-	0,2	1,0	%

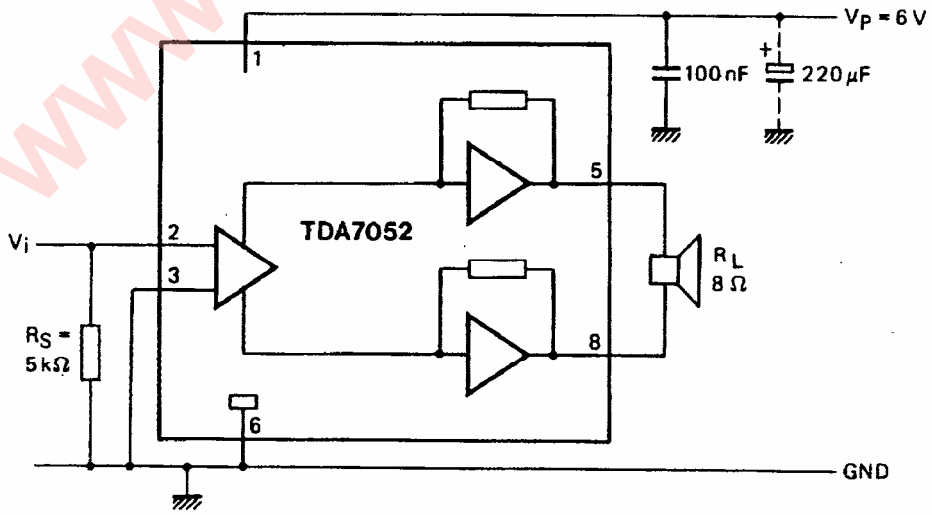
PACKAGE OUTLINE 8-lead DIL; plastic (SOT97); SOT97-1;

PINNNG

1	Vp	supply voltage	5	OUT1	output 1
2	IN	input	6	GND2	ground (substrate)
3	GND1	ground (signal)	7	n.c.	not connected
4	n.c.	not connected	8	OUT2	output 2

RATINGS Limiting values in accordance with the Absolute Maximum System (IEC 134)

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
Vp	Supply voltage	-	18	V
I_{OSM}	Non-repetitive peak output current	-	1,5	A
Tc	Crystal temperature	-	150	°C
Tstg	Storage temperature range	-55	+150 '	°C



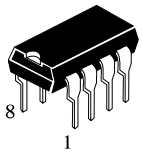
Application diagram

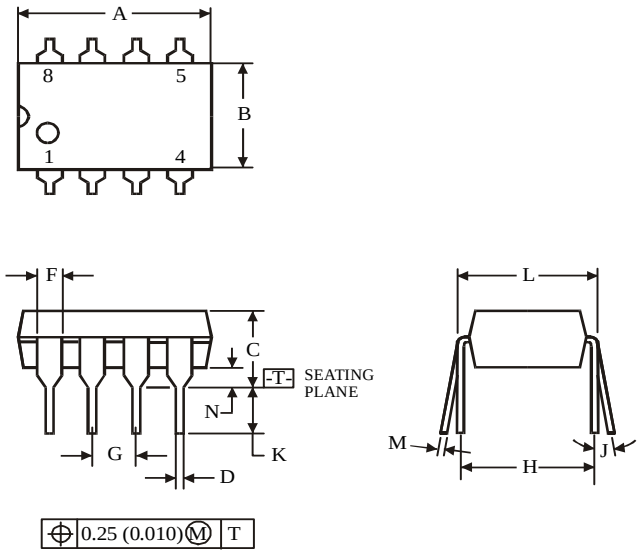
CHARACTERISTICS Vp = 6 V; RL = 8 Q; f = 1 kHz; Tamb = 25 °C; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Supply						
Vp	Supply voltage range		3	6	18	V
Itot	Total quiscent current	$R_L=\infty$	-	4	8	mA
Gv	Voltage gain		38	39	40	dB
Po	Output power	THD = 10%	-	1,2	-	W
	Noise output voltage (RMS value)					
Vno(rms)		note 1	-	150	300	mV
Vno(rms)		note 2	-	60	-	mV
fr	Frequency response		-	20 Hz to 20 kHz	-	Hz
SVRR	Supply voltage ripple rejection	note 3	40	50	-	dB
	DC output offset voltage					
ΔV_{5-8}	pin 5 to 8	Rs = 5 kΩ	-	-	100	mV
THD	Total harmonic distortion	P_O=0.1W	-	0,2	1,0	%
IZiI	Input impedance		-	100	-	kΩ
Ibias	Input bias current		-	100	300	nA

Notes to the characteristics
1. The unweighted RMS noise output voltage is measured at a bandwidth of 60 Hz to 15 kHz with a source impedance (Rs) of 5 kΩ.
2. The RMS noise output voltage is measured at a bandwidth of 5 kHz with asource impedance of 0 Ω and a frequency of 500 kHz. With a practical load (R= 8 Ω; L = 200μH) the noise output current is only 100 nA.
3. Ripple rejection is measured at the output with a source impedance of 0 Q and a frequency between 100 Hz and 10 kHz.
The ripple voltage = 200 mV (RMS value) is applied to the positive supply rail.

N SUFFIX PLASTIC DIP
(MS – 001BA)





	Dimension, mm	
Symbol	**MIN**	**MAX**
A	8.51	10.16
B	6.1	7.11
C		5.33
D	0.36	0.56
F	1.14	1.78
G	2.54	
H	7.62	
J	0°	10°
K	2.92	3.81
L	7.62	8.26
M	0.2	0.36
N	0.38	

NOTES:

1. Dimensions “A”, “B” do not include mold flash or protrusions.
   Maximum mold flash or protrusions 0.25 mm (0.010) per side.