

## OPERATIONAL AMPLIFIER

The TAA243 is a silicon monolithic integrated d.c. amplifier in a TO-99 metal envelope for applications in the temperature range from  $-20$  to  $+100$  °C.

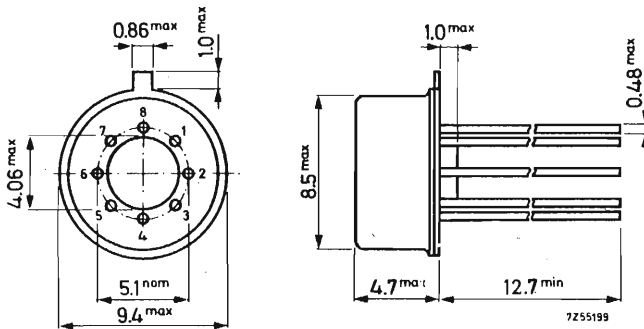
### QUICK REFERENCE DATA

Positive supply voltage	$V_P$	12 V
Negative supply voltage	$-V_N$	6 V
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Characteristics at $T_{amb} = 25$ °C		
Voltage gain	$G_V$	typ. 2300
Common mode rejection ratio	CMRR	typ. 80 dB
Differential input resistance	$R_i$	typ. 20 k $\Omega$
Output resistance	$R_O$	typ. 200 $\Omega$
Power dissipation	$P_{tot}$	typ. 90 mW

### PACKAGE OUTLINE

Dimensions in mm

XA8 (TO-99)



# TAA243

**RATINGS** Limiting values in accordance with the Absolute Maximum System (IEC134)

Voltages

Total supply voltage  $V_{8-4}$  max. 21 V

Common mode voltage  $V_i$  -6 to +1.5 V

Differential mode voltage  $V_{2-3}$  max.  $\pm 5$  V

Output current (peak value)  $I_{OM}$  max. 50 mA

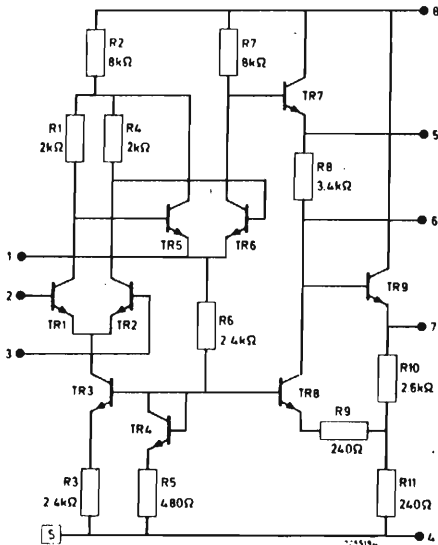
Power consumption up to  $T_{amb} = 75$  °C  $P_{tot}$  max. 200 mW

Temperatures

Operating ambient temperature  $T_{amb}$  -20 to +100 °C

Storage temperature  $T_{stg}$  -65 to +150 °C

**CIRCUIT DIAGRAM**



1. Ground
2. Inverting input
3. Non-inverting input
4. Negative supply
5. Lead frequency compensation
6. Lag frequency compensation
7. Output
8. Positive supply

**CHARACTERISTICS** at  $V_P = 12 \text{ V}$ ;  $-V_N = 6 \text{ V}$ ;  $T_{\text{amb}} = 25 \text{ }^\circ\text{C}$ 

<u>Voltage gain</u>	$G_V$	900 to 4000 typ. 2300
<u>Input offset voltage</u> ; $R_S \leq 2 \text{ k}\Omega$ $T_{\text{amb}} = 0 \text{ to } +70 \text{ }^\circ\text{C}$	$V_{\text{io}}$	typ. 7 mV < 15 mV
<u>Input bias current</u>	$I_i$	typ. 5 $\mu\text{A}$ < 15 $\mu\text{A}$
<u>Input offset current</u>	$I_{\text{io}}$	typ. 3 $\mu\text{A}$ < 5 $\mu\text{A}$
<u>Common mode rejection ratio</u> at $f = 1 \text{ kHz}$	CMRR	> 65 dB typ. 80 dB
<u>Input voltage range</u>	$V_i$	-4 to +0.5 V
<u>Differential input resistance</u>	$R_i$	> 6 k $\Omega$ typ. 20 k $\Omega$
<u>Output impedance</u>	$R_o$	typ. 200 $\Omega$ < 600 $\Omega$
<u>Peak output voltage swing</u> at $R_L \leq 100 \text{ k}\Omega$	$V_{\text{OM}}$	> $\pm 5 \text{ V}$ typ. $\pm 5.3 \text{ V}$
<u>Power dissipation</u> at $V_o = 0$	$P_{\text{tot}}$	typ. 90 mW < 125 mW