

The TAA243 is an operational amplifier for general purpose applications in instrumentation and control systems.

QUICK REFERENCE DATA		
at $T_{amb} = 25^{\circ}\text{C}$		
Supply voltage (nominal)	+12 and -6	V
Differential open loop voltage gain (typ.)	2300	
Common mode rejection ratio (min.)	65	dB
Differential input resistance (typ.)	20	k Ω
Output resistance (typ.)	200	Ω
Input offset voltage (max.) (0 to 70 $^{\circ}\text{C}$)	15	mV
Operating temperature range	-20 to +100	$^{\circ}\text{C}$

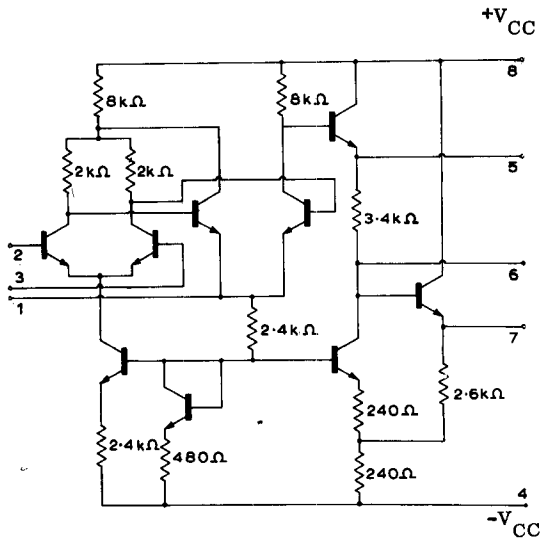
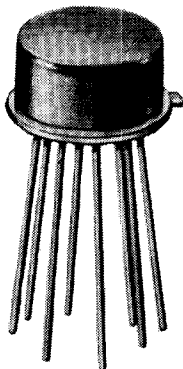
OUTLINE AND DIMENSIONS

Conforms to J.E.D.E.C. TO-99 (eight-lead TO-5)

B.S. 3934 SO-44/SB8-1

For dimensions see page 3.

EQUIVALENT CIRCUIT



For details of pin numbering see page 3

RATINGS

Limiting values of operation according to the absolute maximum system.

Electrical

Supply between pins 8 and 4 (pin 8 positive)	21	V
Input voltage		
common mode	+1.5 to -6.0	V
differential mode	± 5.0	V
Peak output current	50	mA
Power dissipation		
$T_{amb} \leq 70^{\circ}\text{C}$	200	mW

Temperature

T_{stg} min.	-65	$^{\circ}\text{C}$
T_{stg} max.	+150	$^{\circ}\text{C}$
T_{amb} min. (operating)	-20	$^{\circ}\text{C}$
T_{amb} max. (operating)	+100	$^{\circ}\text{C}$

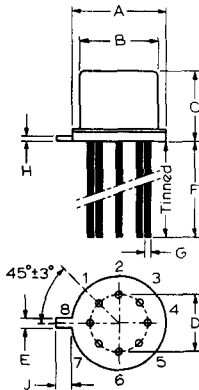
ELECTRICAL CHARACTERISTICS

$T_{amb} = 25^{\circ}\text{C}$, $V_{pos} = 12\text{V}$, $V_{neg} = -6\text{V}$ unless otherwise stated.

	Min.	Typ.	Max.	
Input offset voltage $R_s \leq 2\text{k}\Omega$, $T_{amb} = 0$ to $+70^{\circ}\text{C}$	-	7.0	15	mV
Input offset current	-	3.0	5.0	μA
Input bias current	-	5.0	15	μA
Differential input resistance	6.0	20	-	k Ω
Input voltage range	-4.0	-	+0.5	V
Common mode rejection ratio $f = 1\text{kHz}$	65	80	-	dB
Large signal voltage gain	900	2300	4000	
Output resistance	-	200	600	Ω
Peak output voltage swing $R_L \leq 100\text{k}\Omega$	± 5.0	± 5.3	-	V
Power consumption $V_{out} = 0$	-	90	125	mW



OUTLINE AND DIMENSIONS (Conforms to J.E.D.E.C. TO-99) (8 lead TO-5).



	Millimetres		
	Min.	Nom.	Max.
A	8.64	8.90	9.40
B	7.75	8.15	8.51
C	-	-	4.7
D	-	5.08	-
E	0.71	0.79	0.86
F	12.7	-	-
G	-	0.45	-
H	-	0.4	-
J	0.74	0.85	1.0

Pins

1. Common and earth
2. Inverting input
3. Non-inverting input
4. Negative supply voltage

Pins

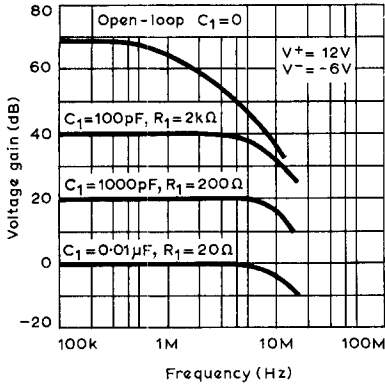
- | | |
|----------------------------|----------------|
| 5. Lead | } Frequency |
| 6. Lag | |
| 7. Output | } Compensation |
| 8. Positive supply voltage | |

SOLDERING AND WIRING RECOMMENDATIONS

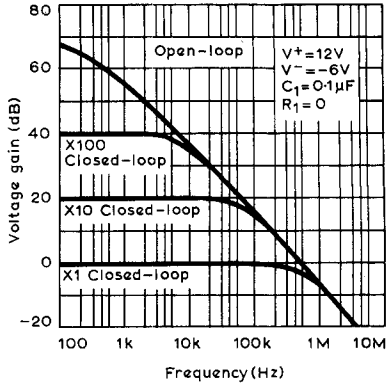
1. Devices may be soldered directly into a circuit with a soldering iron at a maximum iron temperature of 245°C for a time of up to 10 seconds at least 1.5mm from the seal. At an iron temperature of 245°C to 400°C the maximum soldering time is 5 seconds at least 5mm from the seal.
2. These devices may be dip-soldered at a solder temperature of 245°C for a maximum soldering time of 5 seconds. The case temperature during dip-soldering must not at any time exceed the maximum storage temperature. These recommendations apply to a device mounted flush on a board having punched-through holes, or spaced at least 1.5mm above a board having plated-through holes.
3. Care should be taken not to bend the leads nearer than 1.5mm from the seal.
4. If devices are stored at temperatures above 100°C before incorporation into equipment, some deterioration of the external surface is likely to occur which may make soldering into the circuit difficult. Under these circumstances the leads should be retinned using a suitable activated flux.



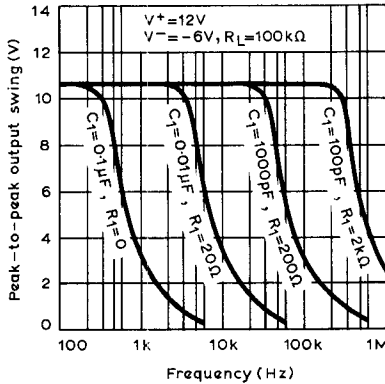
Lag compensation



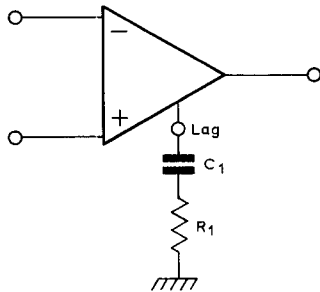
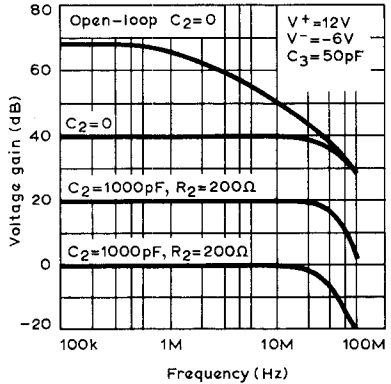
Lag compensation



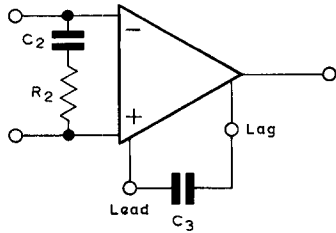
Lag compensation



Lead-lag compensation



Lag compensation



Lead-lag compensation

