

1.1 Scope.

This specification covers the detail requirements for a precision monolithic laser-trimmed BiFET amplifier.

1.2 Part Number.

The complete part number per Table 1 of this specification is as follows:

Device	Part Number
-1	AD549S(X)/883B

1.2.3 Case Outline.

See Appendix 1 of General Specification ADI-M-1000: package outline:

(X)	Package	Description
H	H-08A	8-Pin Metal Package

1.3 Absolute Maximum Ratings. ($T_A = +25^\circ\text{C}$ unless otherwise noted)

Supply Voltage	$\pm 18\text{ V}$
Internal Power Dissipation ¹	500 mW
Differential Input Voltage	$+V_S$ and $-V_S$
Output Short Circuit Duration	Indefinite
Storage Temperature Range	-65°C to $+150^\circ\text{C}$
Operating Temperature Range	-55°C to $+125^\circ\text{C}$
Lead Temperature (Soldering 60 sec)	$+300^\circ\text{C}$

NOTE

¹Maximum package power dissipation vs. ambient temperature.

	MAXIMUM AMBIENT Temperature for Rating	DERATE ABOVE MAXIMUM Ambient Temperature
Package Type		
H-08A	80°C	$7.1\text{ mW}/^\circ\text{C}$

1.5 Thermal Characteristics.

Thermal Resistance $\theta_{JC} = 65^\circ\text{C}/\text{W}$ for H-08A
 $\theta_{JA} = 150^\circ\text{C}/\text{W}$ for H-08A

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Table 1.

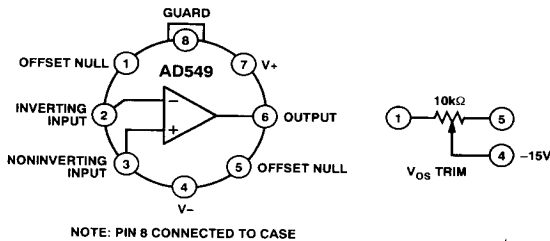
Test	Symbol	Device	Sub Group 1	Sub Group 2, 3	Test Conditions ¹	Units
Input Bias Current ¹	I_B	-1	100		Either Input $V_{CM} = 0$	$\pm$ fA max
Input Offset Voltage ²	V_{OS}	-1	0.5	2		$\pm$ mV max
Input Offset Voltage Drift	TCV_{OS}	-1		15		$\pm$ μ V/ $^{\circ}$ C max
Power Supply Rejection Ratio	PSRR	-1	32	50		$\pm$ μ V/V max
Open-Loop Gain	A_{OL}	-1	300	100	$V_O @ \pm 10$ V, $R_L = 10$ k	V/mV min
Common-Mode Voltage Range	CMVR	-1	10			$\pm$ V
Common-Mode Rejection Ratio	CMRR	-1	90	80	$V = \pm 10$ V	dB min
Output Voltage Swing	V_{OUT}	-1	12	12	$R_L = 10$ k Ω	$\pm$ V min
			10	10	$R_L = 2$ k Ω	
Short Circuit Current	I_{SC}	-1	15	6		mA min
Power Supply Current	I_Q	-1	0.7			mA max

NOTES

¹ $V_S = \pm 15$ V unless otherwise noted. Bias current specifications are guaranteed after 5 minutes of operation at $T_A = +25^{\circ}\text{C}$. Bias current increases by a factor of 2.3 for every 10°C rise in temperature.

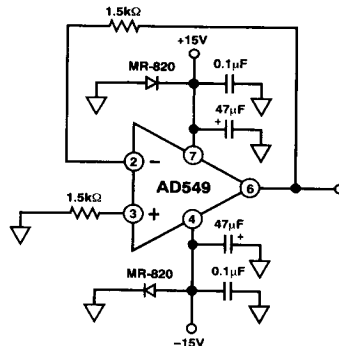
²Input offset voltage specifications are guaranteed after 5 minutes of operation at $T_A = +25^{\circ}\text{C}$.

3.2.1 Functional Block Diagram and Terminal Assignments.



4.2.1 Life Test/Burn-In Circuit.

Steady state life test is per MIL-STD-883 Method 1005. Burn-in is per MIL-STD-883 Method 1015 test condition (B).



3.2.4 Microcircuit Technology Group.

This microcircuit is covered by technology group (85).