1.1 Scope.

This specification covers the detail requirements for a linear bipolar monolithic low drift amplifier.

1.2 Part Number.

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

Device	Part Number
−1	AD OP-07(X)/883B
−2	AD OP-07A(X)/883B

1.2.3 Case Outline.

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

(X)	Package	Description
Q	Q-8	8-Pin Cerdip
H	H-08A	8-Pin TO-99 Metal Can

1.3 Absolute Maximum Ratings. (T_A = +25°C unless otherwise noted)

Supply Voltage	±22V
Internal Power Dissipation[1]	500mW
Differential Input Voltage	$\pm V_S$
Input Voltage	$\pm V_S$
Output Short Circuit Duration	Indefinite
Storage Temperature Range	−65°C to +150°C
Operating Temperature Range	
AD OP-07A, AD OP-07	−55°C to +125°C
Lead Temperature Range (Soldering 60sec)	300°C

NOTE
[1]Maximum package power dissipation vs. ambient temperature.

Package Type	MAXIMUM AMBIENT Temperature for Rating	DERATE ABOVE MAXIMUM Ambient Temperature
TO-99 (H)	80°C	7.1mW/°C
Cerdip (Q)	75°C	6.7mW/°C

1.5 Thermal Characteristics.

Thermal Resistance θ_{JC} = 65°C/W for H-08A
θ_{JA} = 150°C/W for H-08A
θ_{JC} = 22°C/W for Q-8
θ_{JA} = 110°C/W for Q-8

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Table 1.

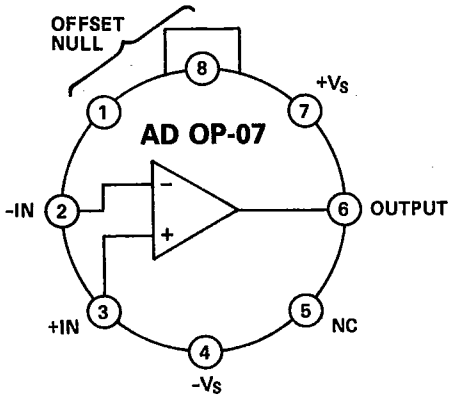
Test	Symbol	Device	Sub Group 1	Sub Group 2, 3	Sub Group 4	Test Condition[1]	Units
Gain Open Loop	A_{VS}	−1	2000	1500		$R_L \geq 2k\Omega$, $V_{OUT} = \pm 10V$	V/mV min
		−2	3000	2000		$R_L \geq 2k\Omega$, $V_{OUT} = \pm 10V$	
Output Voltage Swing	V_{OP}	−1, 2	12.5			$R_L \geq 10k\Omega$	± V min
			12.0	12		$R_L = 2k\Omega$	
			10.5			$R_L = 1k\Omega$	
Input Offset Voltage	V_{IO}	−1	75	200			± µV max
		−2		60	25		
Input Offset Drift	$\Delta V_{IO}/\Delta T$	−1		1.3			± µV/°C max
		−2		0.6			
Input Offset Current	I_{IO}	−1	2.8	5.6			± nA max
		−2	2.0	4.0			
Input Bias Current	I_{IB}	−1	3	6			± nA max
		−2	2	4			
Common-Mode Rejection Ratio	CMRR	−1, 2	110	106		$V_{CM} = \pm$CMVR	dB min
Common-Mode Voltage Range	CMVR	−1, 2	13	13			± V min
Power Supply Current	I_Q	−1, 2	4				mA max
Power Consumption	P_D	−1, 2	120			$V_S = \pm 15V$	mW max
Power Supply Rejection Ratio	PSRR	−1, 2	100	94		$\pm 3V \leq V_S \leq \pm 18V$	dB min

NOTE
[1]$V_S = \pm 15$, unless otherwise noted.

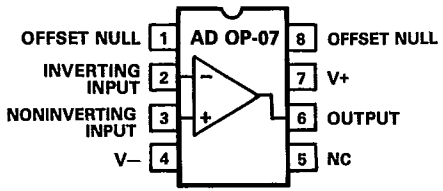
3.2.1 Functional Block Diagram and Terminal Assignments.

Top View

H Package



Q Package (Cerdip)



3.2.4 Microcircuit Technology Group.

This microcircuit is covered by technology group (49).

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).