1.1 Scope.

This specification covers the detail requirements for a precision, monolithic laser-trimmed high speed amplifier.

1.2 Part Number.

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

Device	Part Number
−1	AD846S(X)/883B

1.2.3 Case Outline.

See Appendix 1 of General Specification ADI-M-1000: package outline: Q-8

(X)	Package	Description
Q	Q-8	8-Pin Cerdip Package

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

Supply Voltage	±18V
Internal Power Dissipation[1]	1.3W
Input Common Mode Voltage, Max Safe	$\|V_S\|$ − 3V
Output Short Circuit Duration	Indefinite
Differential Input Voltage	±1V
Continuous Input Current	
Inverting or Noninverting	2.0mA
Storage Temperature Range	−65°C to +150°C
Operating Temperature Range	−55°C to +125°C
Lead Temperature Range (Soldering 60sec)	+300°C

NOTE:

[1]Maximum internal power dissipation is specified so that T_j does not exceed +175°C at an ambient temperature of +25°C. Derate at 8.7mW/°C.

1.5 Thermal Characteristics.

Thermal Resistance θ_{JC} = 30°C/W for Q-8
θ_{JA} = 110°C/W for Q-8

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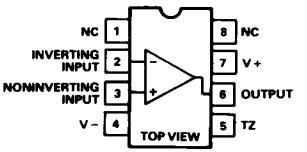
Table 1.

Test	Symbol	Device	Sub Group 1[1]	Sub Group 2, 3	Test Condition[2]	Units
Input Offset Voltage	V_{OS}	−1	200	350		± μV max
Power Supply Rejection Ratio[3]	PSRR	−1	110	94	5V–18V	dB min
Common-Mode Rejection Ratio	CMRR	−1	110	94	V_{CM} = ± 10V	dB min
Input Bias Current[1]	I_B	−1	450	1500	Inverting	± nA max
			15	20	Noninverting	± μA max
Input Bias Current vs. Supply[3]	I_{BPSR}	−1	15	25	Inverting 5V–18V	nA/V max
			15	20	Noninverting 5V–18V	
Input Bias Current vs. Common Mode	I_{BCMR}	−1	10	20	Inverting V_{CM} = ± 10V	nA/V max
			15	20	Noninverting V_{CM} = ± 10V	
Open-Loop Transresistance	TZ	−1	100	50	V_O = ± 10V R_L = 500Ω	MΩ min
Output Voltage Swing	V_{OUT}	−1	10		R_L = 500Ω	± V min
Quiescent Current	I_Q	−1	6.0	7		mA max

NOTES
[1]All specifications are tested after equivalent of 5 minutes at T_A = +25°C.
[2]V_S = ± 15V, unless otherwise noted.
[3]Test conditions: $+V_S$ = 15V, $-V_S$ = −5V to −18V and $+V_S$ = 5V to 18V, $-V_S$ = −15V.

3.2.1 Functional Block Diagram and Terminal Assignments.

Cerdip (Q) Package



3.2.4 Microcircuit Technology Group.

This microcircuit is covered by technology group (85).

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).