

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

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

NOTE:

¹Maximum internal power dissipation is specified so that T_j does not exceed $+175^\circ\text{C}$ at an ambient temperature of $+25^\circ\text{C}$. Derate at $8.7\text{mW}/^\circ\text{C}$.

1.5 Thermal Characteristics.

Thermal Resistance θ_{JC}	$= 30^\circ\text{C}/\text{W}$ for Q-8
θ_{JA}	$= 110^\circ\text{C}/\text{W}$ 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		± μ V 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	± μ A 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 = 500 Ω	M Ω min
Output Voltage Swing	V _{OUT}	- 1	10		R _L = 500 Ω	± V min
Quiescent Current	I _Q	- 1	6.0	7		mA max

NOTES

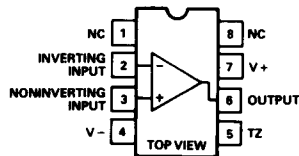
¹All specifications are tested after equivalent of 5 minutes at T_A = + 25°C.

²V_S = ± 15V, unless otherwise noted.

³Test 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).

