1.1 Scope.

This specification covers the detail requirements for a high speed, low power, operational amplifier that is stable at closed loop gains of 5 or greater.

1.2 Part Number.

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

Device	Part Number
−1	AD848SQ/883B

1.2.3 Case Outline.

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

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

Supply Voltage	±18 V
Internal Power Dissipation[1]	1.1 W
Input Common-Mode Voltage, Max Safe	$\pm V_S$
Differential Input Voltage	±6 V
Rated Operating Temperature Range	−55°C to +125°C
Storage Temperature Range	−65°C to +150°C
Lead Temperature (Soldering 60 sec)	+300°C

NOTE

[1]Maximum internal power dissipation is specified so the T_J does not exceed +175°C at an ambient temperature of +25°C. Derates at 7.3 mW/°C.

1.5 Thermal Characteristics.

Thermal Resistance θ_{JA} = 110°C/W

θ_{JC} = 30°C/W

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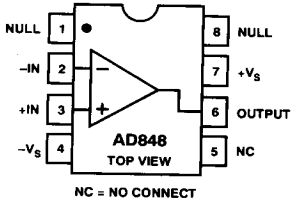
Table 1.

Test	Symbol	Device	Sub Group 1	Sub Group 2, 3	V_S	Test Condition	Units
Input Offset Voltage	V_{OS}	−1	1 2.3	2 3.5	±5 V ±15 V		±mV max
Input Bias Current	I_B	−1	5	7.5	±5 V, ±15 V	V_{CM} = 0 V	±μA max
Input Offset Current	I_{OS}	−1	0.3	0.4	±5 V, ±15 V		±μA max
Open Loop Gain	A_{OL}	−1	9 12	5 6	±5 V ±15 V	V_{OUT} = ±2.5 V, R_{LOAD} = 500 Ω V_{OUT} = ±10 V, R_{LOAD} = 1 kΩ	V/mV min V/mV min
Common-Mode Rejection Ratio	CMRR	−1	92 92	88 88	±5 V ±15 V	V_{CM} = ±2.5 V V_{CM} = ±12 V	dB min
Output Voltage Swing	V_{OUT}	−1	3 2.5 12 10		±5 V ±5 V ±15 V ±15 V	R_{LOAD} = 500 Ω R_{LOAD} = 150 Ω R_{LOAD} = 1 kΩ R_{LOAD} = 500 Ω	±V min ±V min ±V min ±V min
Power Supply Rejection Ratio	PSRR	−1	85	80		V_S = ±4.5 V to ±18 V	dB min
Power Supply Current	I_Q	−1	6.0 6.8	8.3 9.0	±5 V ±15 V	V_{OUT} = 0 V V_{OUT} = 0 V	mA max

3.2.1 Functional Block Diagram and Terminal Assignments.



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).