1.1 Scope.

This specification covers the detail requirements for a high-speed precision monolithic op amp with a high slew rate and wide bandwidth using feed forward circuitry.

1.2 Part Number.

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

Device	Part Number
–1	AD518SH/883B

1.2.3 Case Outline.

See Appendix 1 of General Specification ADI-M-1000: package outline: HO8A

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

Supply Voltage	±20V
Internal Power Dissipation[1]	500mW
Differential Input Voltage[2]	±11.5V
Input Common-Mode Voltage, Max Safe	$\pm V_S$
Output Short Circuit Duration	Indefinite
Storage Temperature Range	−65°C to +150°C
Operating Temperature Range (Ambient)	−55°C to +125°C
Lead Temperature Range (Soldering 60sec)	+300°C

NOTES

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

Package Type	MAXIMUM AMBIENT Temperature for Rating	DERATE ABOVE MAXIMUM Ambient Temperature
TO-99	80°C	7.1mW/°C

[2]The inputs are shunted with back to back diodes; if the V_{DIFF} is greater than ±1V, a resistor should be used in series with the inputs to limit the current to ±10mA.

1.5 Thermal Characteristics.

Thermal Resistance θ_{jc} = 65°C/W

θ_{ja} = 150°C/W

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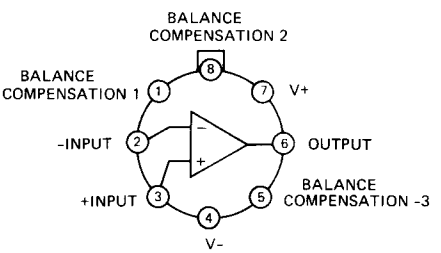
Test	Symbol	Device	Design Limit @ +25°C	Sub Group 1	Sub Group 2, 3	Sub Group 4	Test Condition[1]	Units
Gain Open Loop	A_{OL}	−1	50		25	50	$R_L \geq 2k\Omega\ \Delta V_O = 10V$	V/mV min
Gain Bandwidth Product	GBW	−1	10					MHz min
Slew Rate, Unity Gain	t_{SR}	−1	50					V/μs min
Output Voltage Swing	V_{OUT}	−1	12	12	12		$R_L = 2k\Omega$	± V min
Output Short Circuit Current	I_{SC}	−1	25	65				± mA max
Input Offset Voltage Drift	TCV_{IO}	−1	20		20		$R_S = 100\Omega$	± μV/°C max
Input Offset Voltage	V_{IO}	−1	4	4	6		$R_S = 100\Omega$	± mV max
Input Offset Current	I_{OS}	−1	50	50	100			± nA max
Input Bias Current	I_B	−1	250	250	400			± nA max
Common-Mode Rejection	CMRR	−1	80		80	80		dB min
Common-Mode Voltage Range	CMVR	−1	10	10				± V max
Power Supply Current	I_Q	−1	7	7				mA max
Power Supply Rejection Ratio	PSRR	−1	100		150	100		μV/V max

NOTE
[1] $T_A = +25°C$ and $V_S = \pm 15V$ dc unless otherwise specified.

Table 1.

3.2.1 Functional Block Diagram and Terminal Assignments.

TOP VIEW

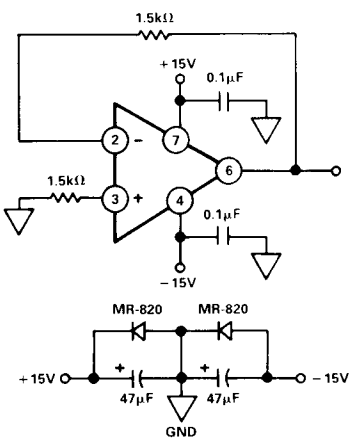


3.2.4 Microcircuit Technology Group.

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).



REV B.