1.1 Scope.

This specification covers the detail requirements for a high precision 10 volt IC reference.

1.2 Part Number.

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

Device	Part Number
–1	AD587SQ/883B
–2	AD587TQ/883B
–3	AD587UQ/883B

1.2.3 Case Outline.

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

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

Input Voltage V_{IN} to Ground	+36V
Power Dissipation	500mW
Storage Temperature Range	–65°C to +150°C
Lead Temperature (Soldering 10secs)	+300°C

1.5 Thermal Characteristics.

Thermal Resistance θ_{JC} = 22°C/W
θ_{JA} = 110°C/W

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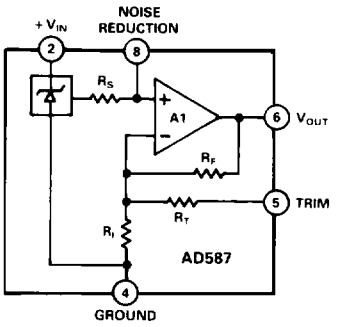
Table 1.

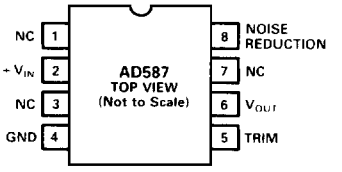
Test	Symbol	Device	Design Limit @ +25°C	Sub Group 1	Sub Group 2,3	Sub Group 4	Test Condition[1]	Units
Quiescent Current	I_{CC}	−1, 2, 3	4	4				+mA max
Output Voltage Error	V_{OUT}	−1	10	10				±mV max
		−2	5	10		5		
		−3	5	10		5		
Output Voltage Temperature Coefficient	V_{OUT}/dT	−1	20		20		T_A = −55°C to +125°C	±ppm/°C max
		−2	10		10			
		−3	5		5			
Gain Adjustment	V_{ADJ}	−1, 2, 3	+300	+300				mV min
			−100	−100				
Line Regulation	VR_{LINE}	−1, 2, 3	100	100	100		13.5V≤V_{IN}≤36V	±μV/V max
Load Regulation, Sourcing	VR_{LOAD}	−1, 2, 3	100	100	100		I_L = 0 to 10mA	±μV/mA max
Load Regulation, Sinking	I_{OUT}	−1, 2, 3	100	100	100		I_L = −10 to 0mA	±μV/mA max
Output Short-Circuit Current	I_{OS}	−1, 2, 3	50	50			To Ground	+mA max
Output Short-Circuit Current	I_{OS}	−1, 2, 3	50	50			To V_{IN}	−mA max

NOTE
[1]T_A = +25°C; V_{CC} = +15V unless otherwise stated.

3.2.1 Functional Block Diagram and Terminal Assignments.



NOTE: MAKE NO CONNECTIONS TO PINS 1, 3, AND 7.

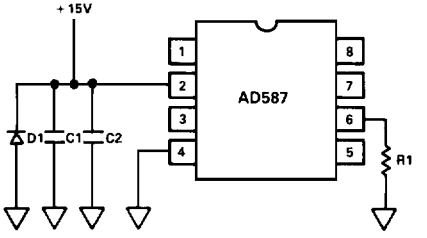


3.2.4 Microcircuit Technology Group.

This microcircuit is covered by technology group (59).

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).



NOTE: D1 = MR-820
C1 = 0.1μF
C2 = 47μF
R1 = 1kΩ 1/2 WATT AT 25°C