



T-58-07

## 5 Volt IC Reference

ADREF02

**1.1 Scope.**

This specification covers the detail requirements for a 5 volt IC reference.

**1.2 Part Number.**

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

Device	Part Number
-1	ADREF02Q/883B
-2	ADREF02AQ/883B

**1.2.3 Case Outline.**

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

**1.3 Absolute Maximum Ratings.** ( $T_A = +25^\circ\text{C}$  unless otherwise noted)

Input Voltage $V_{IN}$ to Ground . . . . .	+36V
Power Dissipation . . . . .	500mW
Storage Temperature Range . . . . .	$-65^\circ\text{C}$ to $+150^\circ\text{C}$
Lead Temperature (Soldering 10sec) . . . . .	$+300^\circ\text{C}$

**1.5 Thermal Characteristics.**

Thermal Resistance  $\theta_{JC} = 22^\circ\text{C}/\text{W}$   
 $\theta_{JA} = 110^\circ\text{C}/\text{W}$

**ADREF02 – SPECIFICATIONS**

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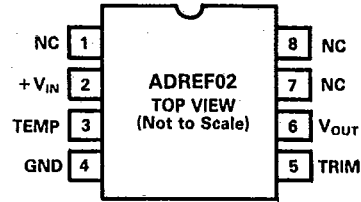
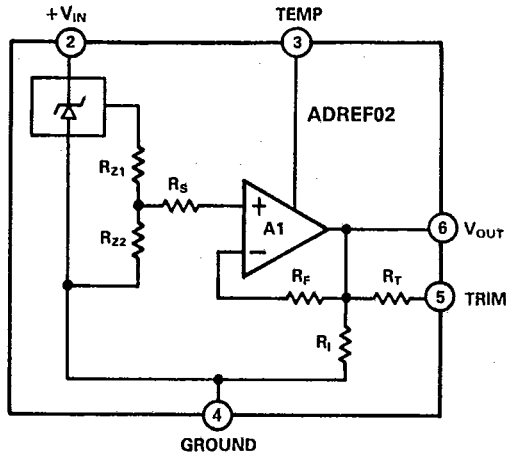
Test	Symbol	Device	Design Limit @ +25°C	Sub Group 1	Sub Group 2,3	Sub Group 4	Test Condition <sup>1</sup>	Units
Quiescent Current	I <sub>CC</sub>	-1,2	3	3				+ mA max
Output Voltage Error	V <sub>OUT</sub>	-1 -2	25 15	25 25		15		± mV max
Gain Adjustment	V <sub>ADJ</sub>	-1,2	+300 -100	+300 -100				mV min
Line Regulation	V <sub>RLINE</sub>	-1,2	150	150	150		11.4V ≤ V <sub>IN</sub> ≤ 36V	± μV/V max
Load Regulation, Sourcing	V <sub>RLOAD</sub>	-1,2	150	150	150		I <sub>L</sub> = 0 to 10mA	± μV/mA max
Load Regulation, Sinking	I <sub>OUT</sub>	-1,2	400	400			I <sub>L</sub> = -10 to 0mA	± μV/mA max
Output Voltage Temperature Coefficient	DV <sub>OUT</sub> /dT	-1 -2	25 8.5		25 8.5		T <sub>A</sub> = -55°C to +125°C	± ppm/°C max
Output Short-Circuit Current	I <sub>OS</sub>	-1	50	50			To Ground	+ mA max

Table 1.

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### 3.2.1 Functional Block Diagram and Terminal Assignments.



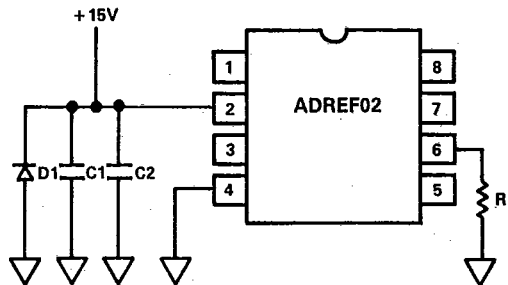
NOTE: PINS 1, 7 & 8 ARE INTERNAL TEST POINTS.  
MAKE NO CONNECTIONS TO THESE POINTS.

### 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 = 500Ω 1/2 WATT AT 25°C