

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	AD581SH/883B
-2	AD581TH/883B
-3	AD581UH/883B

1.2.3 Case Outline.

See Appendix 1 of General Specification ADI-M-1000: package outline: H-03B.

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

Input Voltage V_{CC} to Ground	40V
Power Dissipation (25°C)	600mW
Storage Temperature Range	-65°C to $+150^\circ\text{C}$
Lead Temperature Range (Soldering 10sec)	$+300^\circ\text{C}$

1.5 Thermal Characteristics.

Thermal Resistance $\theta_{JC} = 30^\circ\text{C/W}$
 $\theta_{JA} = 150^\circ\text{C/W}$

AD581 — SPECIFICATIONS

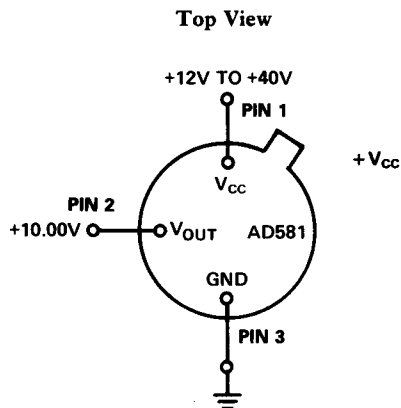
Table 1.

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	1.0	1.0				+ mA max
Output Voltage Error	V_{OUT}	- 1	30	30				± mV max
		- 2	10	30		10		
		- 3	5	30		5		
Line Regulation	V_{RLINE1}	- 1, 2, 3	3.0	3.0			$V_{CC} = 15V$ to 30V	± mV max
Line Regulation	V_{RLINE2}	- 1, 2, 3	1.0	1.0			$V_{CC} = 13V$ to 15V	± mV max
Load Regulation	V_{RLOAD}	- 1, 2, 3	500	500			$I_L = 0mA$ to 5mA	± $\mu V/mA$
Output Voltage Temperature Coefficient	$\Delta V_O/\Delta T$	- 1	30		30		$T_A = 25^\circ C$ to 125°C $T_A = 25^\circ C$ to - 55°C	± mV max
		- 2	15		15			
		- 3	10		10			
Output Current Source	I_{OUT}	- 1, 2, 3	10				$T_A = +25^\circ C$ T_{min} to T_{max}	mA min
			5					mA min
Output Current Sink	I_{OUT}	- 1, 2, 3	0.2				+ 80°C to + 125°C - 55°C to + 80°C	mA min
			5.0					mA min
Output Short Circuit Current	I_{OS}	- 1, 2, 3	55	55				- mA max

NOTE

¹ $V_{CC} = +15V$, $I_L = 0mA$, unless otherwise indicated.

3.2.1 Functional Block Diagram and Terminal Assignments.

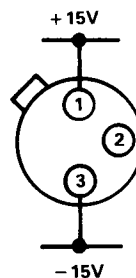


4.2.1 Life Test/Burn-In Circuit.

Steady state life test is per MIL-STD-883 Method 1005.

Burn-in is per MIL-STD-883 Method 1015 test condition (B).

Bottom View



3.2.4 Microcircuit Technology Group.

This microcircuit is covered by technology group (59).