

**1.1 Scope.**

This specification covers the detail requirement for a precision monolithic laser-trimmed BiFET amplifier.

**1.2 Part Number.**

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

Device	Part Number
-1	AD711S(X)/883B
-2	AD711T(X)/883B

**1.2.3 Case Outline.**

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

(X)	Package	Description
Q	Q-8	8-Pin Cerdip Package

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

Supply Voltage	$\pm 18\text{ V}$
Internal Power Dissipation	500 mW
Input Voltage	$\pm 18\text{ V}$
Output Short Circuit Duration	Indefinite
Differential Input Voltage	$+V_S$ and $-V_S$
Storage Temperature Range	$-65^\circ\text{C}$ to $+150^\circ\text{C}$
Operating Temperature Range	$-55^\circ\text{C}$ to $+125^\circ\text{C}$
Lead Temperature Range (Soldering 60 sec)	$+300^\circ\text{C}$

**NOTE**

<sup>1</sup>Maximum package power dissipation vs. ambient temperature.

Package Type	MAXIMUM AMBIENT Temperature for Rating	DERATE ABOVE MAXIMUM Ambient Temperature
Q-8	$+75^\circ\text{C}$	$6.7\text{ mW}/^\circ\text{C}$

**1.5 Thermal Characteristics.**

Thermal Resistance  $\theta_{JC} = 22^\circ\text{C}/\text{W}$  for Q-8  
 $\theta_{JA} = 110^\circ\text{C}/\text{W}$  for Q-8

# AD711—SPECIFICATIONS

Table 1.

Test	Symbol	Device	Sub Group 1	Sub Group 2, 3	Test Condition <sup>1</sup>	Unit
Input Offset Voltage <sup>2</sup>	$V_{OS}$	-1	1.0	2.0		$\pm$ mV max
		-2	1.0	1.0		
Input Offset Voltage Drift	$TCV_{OS}$	-1		20		$\pm$ $\mu$ V/ $^{\circ}$ C max
		-2		10		
Power Supply Rejection Ratio	PSRR	-1	76	76		dB min
		-2	76	80		
Input Bias Current <sup>3</sup>	$I_B$	-1, -2	50		Either Input, $V_{CM} = 0$	$\pm$ pA max
			100		Either Input, $V_{CM} = +10$ V	
Input Offset Current <sup>3</sup>	$I_{OS}$	-1, -2	25		$V_{CM} = 0$	$\pm$ pA max
Slew Rate	$t_{SR}$	-1, -2	16		Unity Gain	V/ $\mu$ s min
Common-Mode Rejection Ratio	CMRR	-1	76	76	$V_{CM} = \pm 10$ V	dB min
		-2	76	80		
		-1	70	70	$V_{CM} = \pm 11$ V	
		-2	70	74		
Open-Loop Gain	$A_{OL}$	-1	150	100	$V_O = \pm 10$ V, $R_L \geq 2$ k $\Omega$	V/mV min
		-2	150	100		
Output Voltage Swing	$V_{OUT}$	-1, -2	+13/-12.5	$\pm 12$	$R_L \geq 2$ k $\Omega$	$\pm$ V min
Power Supply Current	$I_Q$	-1, -2	3.4			mA max

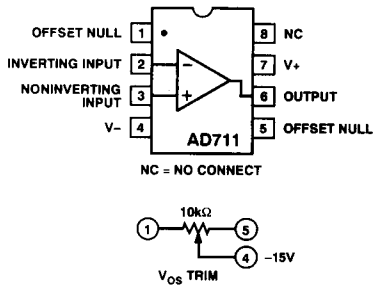
NOTES

<sup>1</sup> $V_S = \pm 15$  V unless otherwise noted.

<sup>2</sup>Input offset voltage specifications are guaranteed with  $V_{OS}$  unnullled at  $T_A = +25^{\circ}$ C. Nulling will induce an additional  $\pm 3 \mu$ V/ $^{\circ}$ C per mV of adjustment.

<sup>3</sup>Bias current specifications guaranteed after 5 minutes of operation at  $T_A = +25^{\circ}$ C. For temperatures above  $+25^{\circ}$ C, the current doubles every  $10^{\circ}$ C.

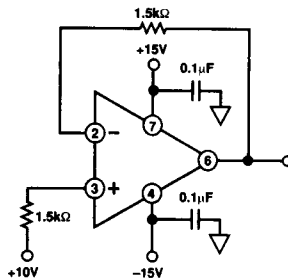
### 3.2.1 Functional Block Diagram and Terminal Assignments.



### 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).



### 3.2.4 Microcircuit Technology Group.

This microcircuit is covered by technology group (85).

