

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

NOTE

¹Maximum 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

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Table 1.

Test	Symbol	Device	Sub Group 1	Sub Group 2, 3	Test Condition ¹	Unit
Input Offset Voltage ²	V_{OS}	-1	1.0	2.0		\pm mV max
		-2	1.0	1.0		
Input Offset Voltage Drift	TCV_{OS}	-1		20		\pm μ V/ $^{\circ}$ C max
		-2		10		
Power Supply Rejection Ratio	PSRR	-1	76	76		dB min
		-2	76	80		
Input Bias Current ³	I_B	-1, -2	50		Either Input, $V_{CM} = 0$	\pm pA max
			100		Either Input, $V_{CM} = +10$ V	
Input Offset Current ³	I_{OS}	-1, -2	25		$V_{CM} = 0$	\pm pA max
Slew Rate	t_{SR}	-1, -2	16		Unity Gain	V/ μ 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 Ω	V/mV min
		-2	150	100		
Output Voltage Swing	V_{OUT}	-1, -2	+13/-12.5	± 12	$R_L \geq 2$ k Ω	\pm V min
Power Supply Current	I_Q	-1, -2	3.4			mA max

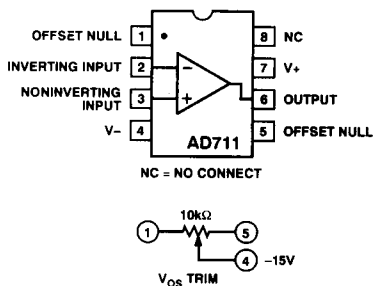
NOTES

¹ $V_S = \pm 15$ V unless otherwise noted.

²Input 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.

³Bias 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° C.

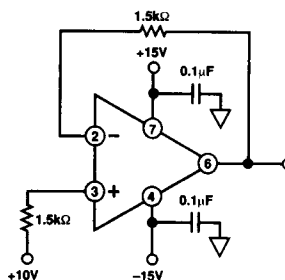
3.2.1 Functional Block Diagram and Terminal Assignments.



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).

