



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
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SVR1083 SERIES

**35 Volt
 Low Dropout
 Positive Adjustable Linear
 Voltage Regulator**

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

SVR1083

Screening^{2/} ___ = Not Screened
 H = MIL-PRF-38534 class H
 K = MIL-PRF-38534 class K
 Q = 6

Package^{3/} J = TO-257
 M = TO-254
 N = TO-258
 S.5 = SMD.5

- Features:**
- Eutectic Die Attach
 - Fast Switching
 - Hermetically Sealed Power Package
 - 150 °C Operating Temperature
 - Custom Lead Forming Available
 - Ceramic Seal Package Available
 - Class H or K Screening Available i.a.w. MIL-PRF-38534
 - LT1083 performance in high reliability applications

Maximum Ratings ^{4/}	Symbol	Value	Units
Power Dissipation	P _D	Internally Limited	---
Input-Output Voltage Differential	ΔV	35	V
Output Current	I _o	7.5	A
Maximum Operating Junction Temperature	T _{Jmax}	+150	°C
Storage Temperature	T _{STG}	-65 to +150	°C

TO-257 (J)	TO-254 (M)	TO-258 (N)	SMD.5 (S.5)
PIN ASSIGNMENT			
FUNCTION	PIN 1	PIN 2	PIN 3
Voltage Regulator	Adjust	Output	Input

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: SVR007B

DOC



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Electrical Characteristics	T °	Symbol	Min	Typ	Max	Units
Reference Voltage ($ V_{in} - V_{out} = 3.0V$; $I_{out} = 10mA$) ($1.5V \leq V_{in} - V_{out} \leq 25V$; $10mA \leq I_{out} \leq 5.0A$)	25 °C -55 °C, to +125 °C	V_{REF}	1.238 1.225	1.25 1.25	1.262 1.270	Volts
Line Regulation ($1.5V \leq V_{in} - V_{out} \leq 15V$; $I_{out} = 10mA$) ($1.5V \leq V_{in} - V_{out} \leq 35V$; $I_{out} = 10mA$)	25 °C -55 °C to +125 °C	$\frac{\Delta V_{out}}{\Delta V_{in}}$	—	0.015 0.05	0.2 0.5	%
Load Regulation ($ V_{in} - V_{out} = 3.0V$) ($10mA \leq I_{out} \leq 5.0A$)	25 °C -55 °C to +125 °C	$\frac{\Delta V_{out}}{\Delta I_{out}}$	—	0.1 0.2	0.3 0.4	%
Dropout Voltage ($I_{out} = 5.0A$; $\Delta V_{ref} = 1\%$)	-55 °C to +125 °C	V_{DO}	—	1.3	1.5	V
Thermal Regulation (30ms pulse)	25 °C	—	—	0.002	0.01	%/W
Ripple Rejection ($f = 120Hz$, $C_{ADJ} = 25 \mu F$, $C_{out} = 25 \mu F$ (tantalum) $I_{out} = 5.0A$; $ V_{in} - V_{out} = 3.0V$)	-55 °C to +125 °C	$\frac{\Delta V_{in}}{\Delta V_{out}}$	60	75	—	dB
Adjust Pin Current ($10mA \leq I_{out} \leq 5.0A$; $1.5V \leq V_{in} - V_{out} \leq 25V$)	-55 °C to +125 °C	I_{ADJ}	—		120	uA
Adjust Pin Current Change ($10mA \leq I_{out} \leq 5.0A$; $1.5V \leq V_{in} - V_{out} \leq 25V$)	-55 °C to +125 °C	ΔI_{ADJ}	—	0.2	5.0	uA
Minimum load current ($ V_{in} - V_{out} = 25V$)	-55 °C to +125 °C	I_{MIN}	—	5	10	mA
Current Limit ($ V_{in} - V_{out} = 5.0V$) ($ V_{in} - V_{out} = 25V$)	-55 °C to +125 °C	I_{LIM}	8.0 0.4	9.5 1.0	—	A
Temperature Stability ^{5/}	-55 °C to +125 °C	$\frac{\Delta V_{out}}{\Delta T}$	—	0.5	1.5	%
Long Term Stability ^{5/} ($t = 1000hrs.$)	+125 °C	$\frac{\Delta V_{out}}{\Delta T}$	—	0.3	1.0	%

NOTES:

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Class H or K Screening Available i.a.w. MIL-PRF-38534

3/ For Package Outlines and Lead Bend Options Contact Factory. All leads and terminals are hot solder dipped with SN63 tin-lead solder.

4/ Absolute Maximum Ratings Are Those Values Beyond Which the Life of a Device May Be Impaired

5/ Guaranteed by Design.

6/ These parts are manufactured and screened to the requirements of MIL-PRF-38534 Class H including, Group A, Group C temperature cycling, 1000 hour life test at +125°C only.