Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SVR1083 SERIES

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/

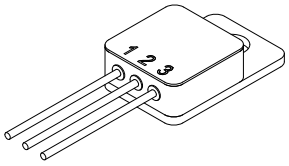
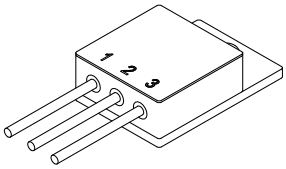
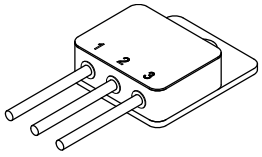
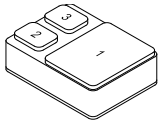
Package 3/
J = TO-257
M = TO-254
N = TO-258
S.5 = SMD.5

35 Volt Low Dropout Positive Adjustable Linear Voltage Regulator

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	Unit
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	PACKAGE	PIN 1	PIN 2	PIN 3
Voltage Regulator	TO-257, TO-254, TO-258	Adjust	Output	Input
Voltage Regulator	SMD.5	Input	Adjust	Output

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Electrical Characteristics	T°	Symbol	Min	Typ	Max	Unit
Reference Voltage (|Vin – Vout| = 3.0 V; Iout = 10 mA) (1.5 V ≤ |Vin – Vout| ≤ 25 V; 10 mA ≤ Iout ≤ 5.0 A)	25°C -55°C to +125°C	V_{REF}	1.238 1.225	1.25 1.25	1.262 1.270	**V**
Line Regulation (1.5 V ≤ |Vin – Vout| ≤ 15 V; Iout = 10 mA) (1.5 V ≤ |Vin – Vout| ≤ 35 V; Iout = 10 mA)	25°C -55°C to +125°C	$\frac{\Delta V_{out}}{\Delta V_{in}}$	— —	0.015 0.05	0.2 0.5	**%**
Load Regulation (|Vin – Vout| = 3.0 V) (10 mA ≤ Iout ≤ 5.0 A)	25°C -55°C to +125°C	$\frac{\Delta V_{out}}{\Delta I_{out}}$	— —	0.1 0.2	0.3 0.4	**%**
Dropout Voltage (Iout = 5.0 A; ∆Vref = 1%)	-55°C to +125°C	V_{DO}	—	1.3	1.5	**V**
Thermal Regulation (30 ms pulse)	25°C	—	—	0.002	0.01	**%/W**
Ripple Rejection (f = 120 Hz, C_{ADJ} = 25 µF, Cout = 25 µF (tantalum) Iout = 5.0 A; |Vin – Vout| = 3.0 V)	-55°C to +125°C	$\frac{\Delta V_{in}}{\Delta V_{out}}$	60	75	—	**dB**
Adjust Pin Current (10 mA ≤ Iout ≤ 5.0 A; 1.5 V ≤ |Vin – Vout| ≤ 25 V)	-55°C to +125°C	I_{ADJ}	—	—	120	**µA**
Adjust Pin Current Change (10 mA ≤ Iout ≤ 5.0 A; 1.5 V ≤ |Vin – Vout| ≤ 25 V)	-55°C to +125°C	ΔI_{ADJ}	—	0.2	5.0	**µA**
Minimum load current (|Vin – Vout| = 25 V)	-55°C to +125°C	I_{MIN}	—	5	10	**mA**
Current Limit (|Vin – Vout| = 5.0 V) (|Vin – Vout| = 25 V)	-55°C to +125°C	I_{LIM}	8.0 0.4	9.5 1.0	— —	**A**
Temperature Stability5/	-55°C to +125°C	$\frac{\Delta V_{out}}{\Delta T}$	—	0.5	1.5	**%**
Long Term Stability5/ (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.

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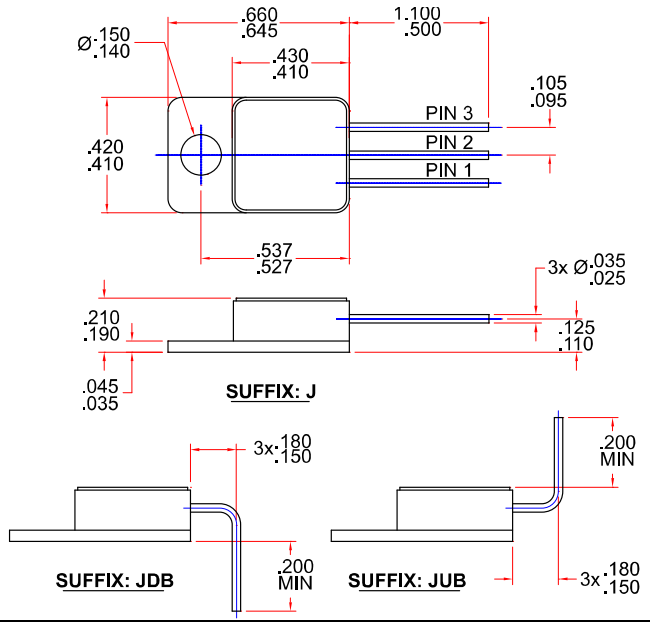
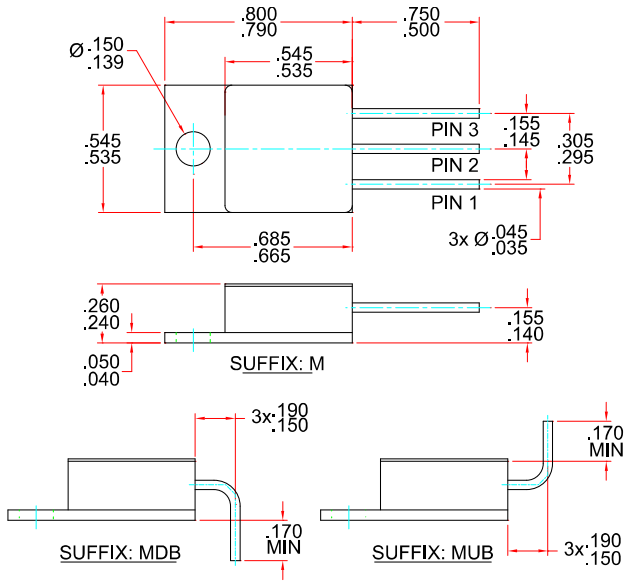
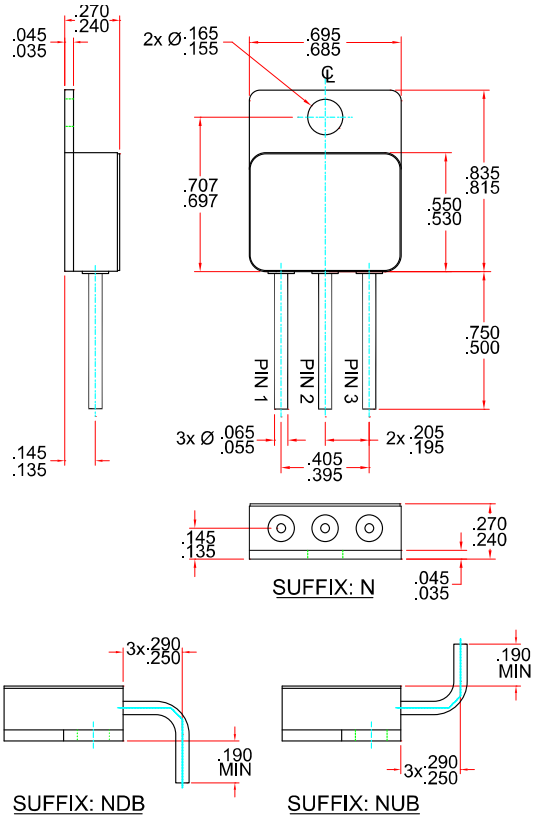
Case Outline: TO-257 (J)



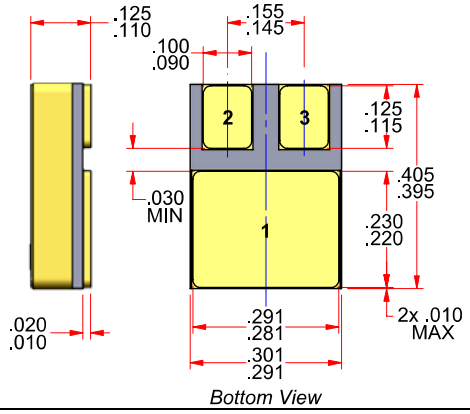
Case Outline: TO-254 (M)



Case Outline: TO-258 (N)

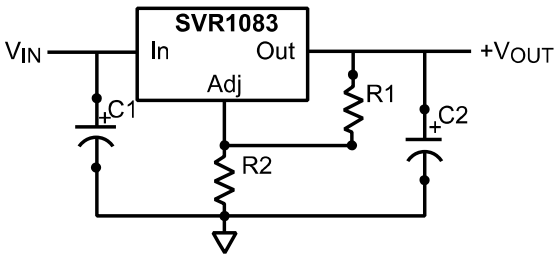


Case Outline: SMD.5 (S.5)



Bottom View

Typical Application



$V_{OUT} = V_{REF} (1 + R2 / R1)$
C1, C2 are filter capacitors (if needed)

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: SVR007D**	**DOCX**