



# Solid State Devices, Inc.

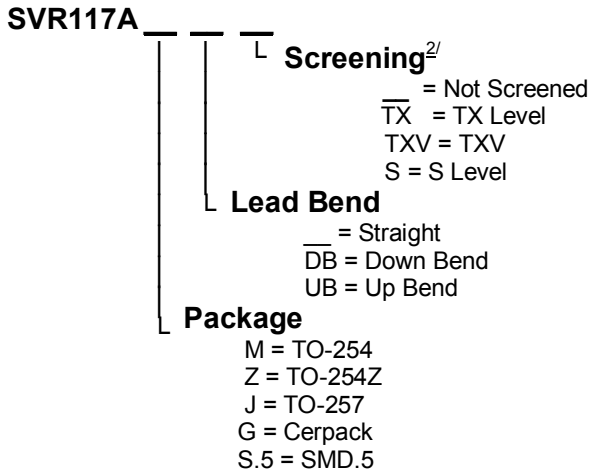
14701 Firestone Blvd \* La Mirada, Ca 90638  
Phone: (562) 404-4474 \* Fax: (562) 404-1773  
ssdi@ssdi-power.com \* www.ssdi-power.com

# SVR117A Series

## 1.5 AMP Positive Adjustable Linear Voltage Regulator 40 Volts

### Designer's Data Sheet

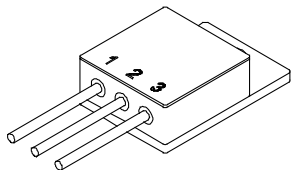
#### Part Number / Ordering Information <sup>1/</sup>



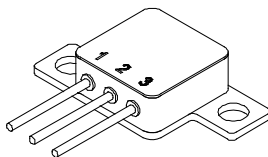
- Features:**
- Guaranteed 1% output voltage tolerance
  - Guaranteed 0.01% line regulation
  - Guaranteed 0.3% load regulation
  - Min 1.5A output current
  - Eutectic die attach
  - Superior to LM117 types
  - Complimentary use with LM137 types
  - Isolated hermetically sealed power package
  - 150°C operating temperature
  - Custom lead forming available
  - TX, TXV, and Space Level Screening Available

MAXIMUM RATINGS	Symbol	Value	Units
Power Dissipation <sup>3/</sup>	$P_D$	Internally Limited, 20	W
Input to Output Voltage Differential	$^aV_{IN/OUT}$	40	V
Maximum Current Load	$I_{FSM}$	100	Amps
Operating Junction Temperature	$T_J$	-55 to +150	°C
Storage Temperature	$T_{STG}$	-65 to +150	°C

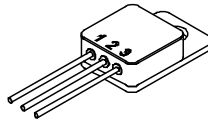
TO-254(M)



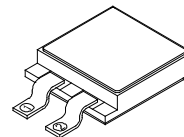
TO-254Z(Z)



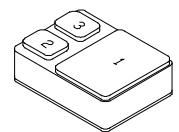
TO-257(J)



Cerpack (G)



SMD.5 (S.5)



**Notes:**

- 1/** For ordering information, price, operating curves, and availability, contact factory.
- 2/** Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/** Unless otherwise specified, these specifications apply:  $^a V = 5V$  and  $I_{OUT} = 0.5A$ . Power dissipation is internally limited. However, these specifications apply for power dissipation up to 20W,  $I_{MAX} = 1.5A$ .
- 4/** Testing is done using a pulsed low duty cycle technique.



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ELECTRICAL CHARACTERISTICS <sup>3/</sup>	t°	Symbol	Min	Typ	Max	Unit	
<b>Reference Voltage</b> 10mA ≤ I <sub>OUT</sub> ≤ I <sub>MAX</sub> , 3V ≤ ΔV ≤ 40V, P ≤ P <sub>MAX</sub> <sup>a</sup> V = 5V, I <sub>OUT</sub> = 10mA	25 *	V <sub>REF</sub>	1.238 1.225	1.250 -1.250	1.262 1.270	V	
<b>Line Regulation<sup>4/</sup></b> (3V ≤ ΔV ≤ 40V)	25 *	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	-- --	0.005 0.01	0.010 0.02	%/V	
<b>Load Regulation<sup>4/</sup></b> (10mA ≤ I <sub>OUT</sub> ≤ I <sub>MAX</sub> )	25	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	--	5	15	mV	
	25		--	0.1	0.3	%	
	*		--	20	50	mV	
	*		--	0.3	1.0	%	
<b>Thermal Regulation</b> 20 msec Pulse	25		--	.002	.02	%/W	
<b>Ripple Rejection</b> V <sub>OUT</sub> = -10V, f = 120Hz	25		--	65	--	dB	
	25		66	80	--		
<b>Adjust Pin Current</b>	*	I <sub>ADJ</sub>	--	50	100	μA	
<b>Adjust Pin Current Change</b> 10mA ≤ I <sub>OUT</sub> ≤ I <sub>MAX</sub> , 2.5V ≤ ΔV ≤ 40V	*	Δ I <sub>ADJ</sub>	--	0.2	5	μA	
<b>Minimum Load Current</b> ΔV ≤ 40V	*		--	3.5	5.0	mA	
<b>Temperature Stability</b> -55°C ≤ T <sub>J</sub> ≤ +150°C	*	$\frac{\Delta V_{OUT}}{\Delta T}$	--	1	2	%	
<b>Long Term Stability</b>	125	$\frac{\Delta V_{OUT}}{\Delta V_{time}}$	--	0.3	1.0	%	
<b>RMS Output Noise</b> (% of V <sub>OUT</sub> )	25	e <sub>n</sub>	--	0.001	--	%	
<b>Thermal Resistance</b> Junction to Case		R <sub>θJC</sub>	Package J, M, and Z	--	--	4.0	°C/W
			Package E	--	--	2.5	

**Notes:**

**\*Full Temperature Range**

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2/ Screening based on MIL-PRF-19500. Screening flows available on request.

3/ Unless otherwise specified, these specifications apply: <sup>a</sup>V = 5V and I<sub>OUT</sub> = 0.5A. Power dissipation is internally limited. However, these specifications apply for power dissipation up to 20W, I<sub>MAX</sub> = 1.5A.

4/ Testing is done using a pulsed low duty cycle technique.

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

DATA SHEET #: LA0005D

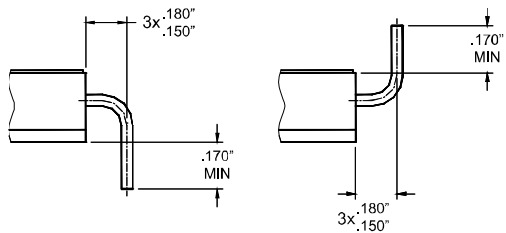
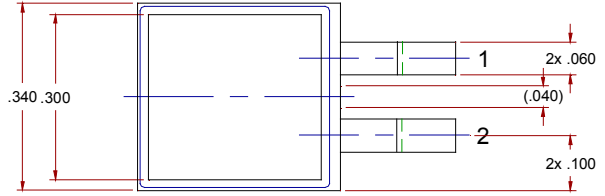
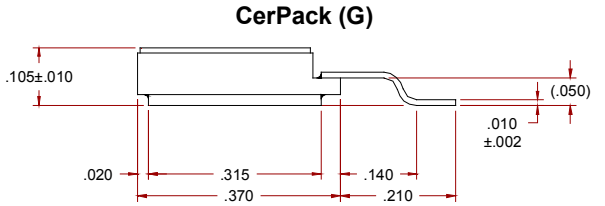
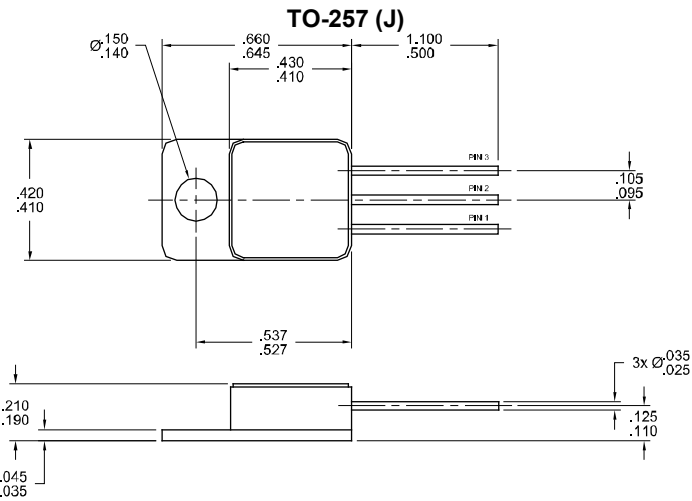
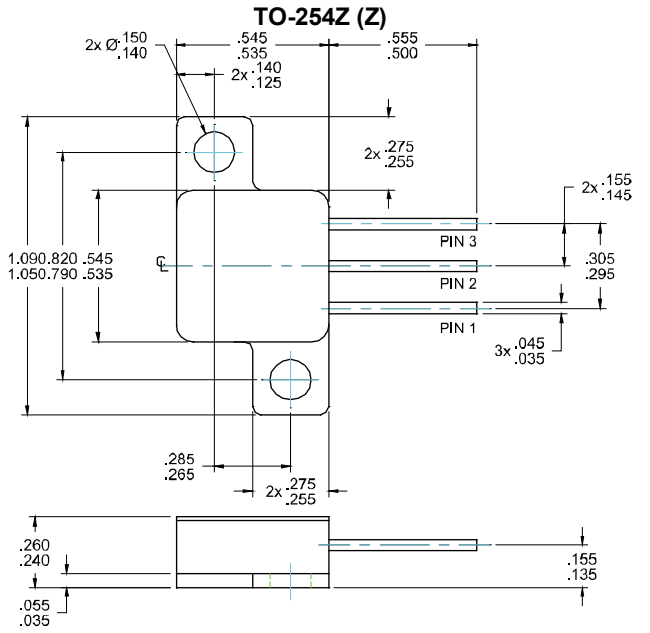
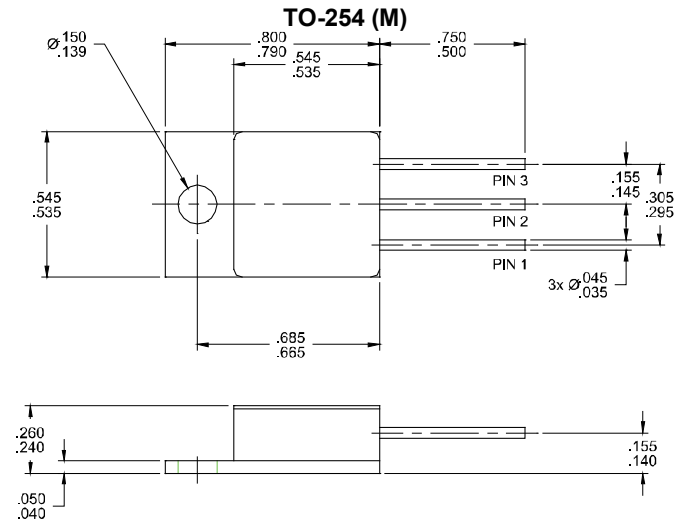
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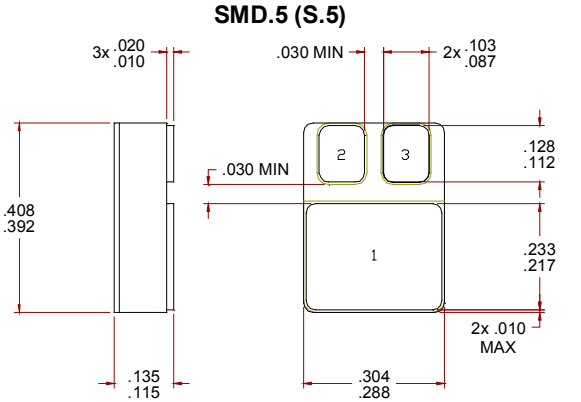
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**PIN ASSIGNMENT**

Package	Adjust	Output	Input
TO-254 (M), TO254Z (Z), TO-257 (J), SMD.5 (S.5)	Pin 1	Pin 2	Pin 3
Cerpack (G)	Base	Pin 1	Pin 2



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