



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

SVR117AHV Series

1.5 AMP High Voltage Positive Adjustable Linear Voltage Regulator 60 Volts

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SVR117AHV

Screening ^{2/}

— = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Lead Bend

— = Straight
 DB = Down Bend
 UB = Up Bend

Package

M = TO-254 G = Cerpack
 Z = TO-254Z S.5 = SMD.5
 J = TO-257 S1 = SMD1

Features:

- Guaranteed 1% output voltage tolerance
- Guaranteed 0.01% line regulation
- Guaranteed 0.3% load regulation
- Min 1.5 A 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	Unit
Power Dissipation ^{3/}	P_D	Internally Limited, 62	W
Input to Output Voltage Differential	$\Delta V_{IN/OUT}$	60	V
Maximum Current Load	I_{OUT}	1.5	A
Operating Junction Temperature	T_J	-55 to +150	°C
Storage Temperature	T_{STG}	-65 to +150	°C

Cerpack (G)

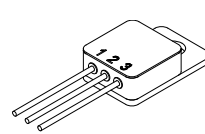
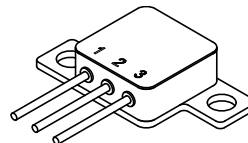
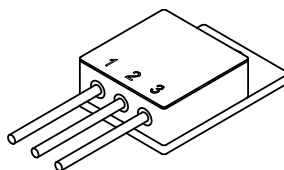
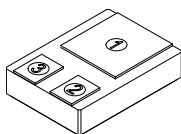
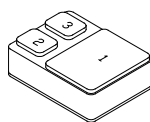
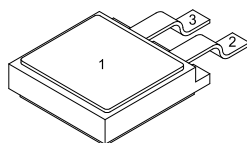
SMD.5 (S.5)

SMD1 (S1)

TO-254(M)

TO-254Z(Z)

TO-257(J)



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: $\Delta V = 5$ V and $I_{OUT} = 0.5$ A. Power dissipation is internally limited. However, these specifications apply for power dissipation up to 20 W, $I_{MAX} = 1.5$ A.

^{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.

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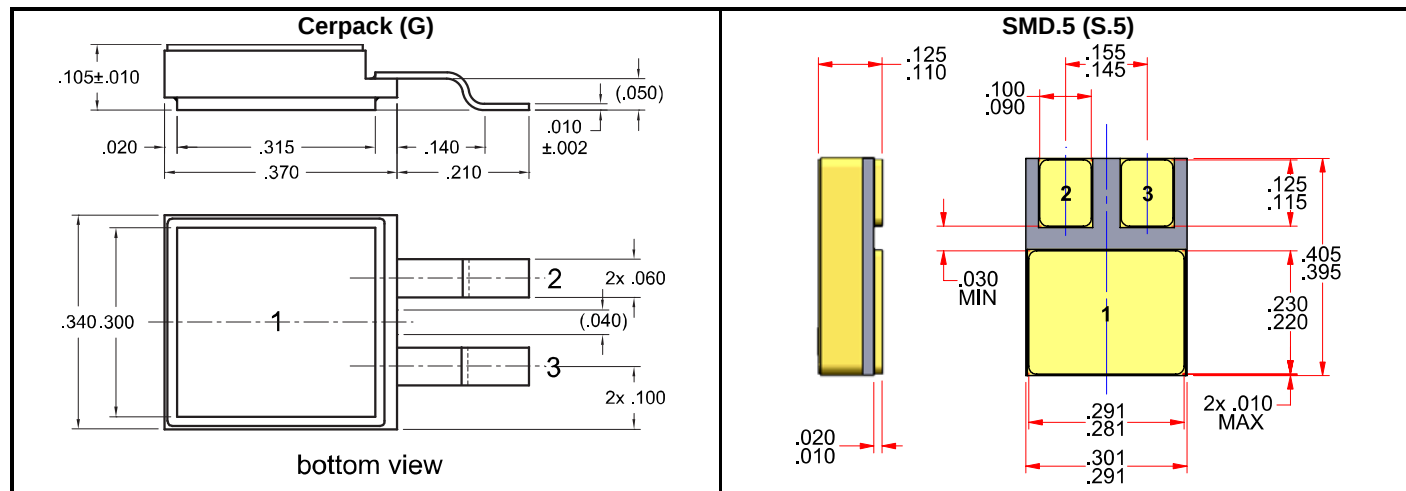


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ELECTRICAL CHARACTERISTICS ^{3/}		t°	Symbol	Min	Typ	Max	Unit
Reference Voltage	$I_{OUT} = 10 \text{ mA}$ $10 \text{ mA} \leq I_{OUT} \leq I_{MAX}$, $3 \text{ V} \leq \Delta V \leq 60 \text{ V}$, $P \leq P_{MAX}$	25 *	V_{REF}	1.238 1.225	1.250 1.250	1.262 1.270	V
Line Regulation^{4/} ($3 \text{ V} \leq \Delta V \leq 60 \text{ V}$)		25 *	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	-- --	0.005 0.01	0.010 0.02	%/V
Load Regulation^{4/} ($10 \text{ mA} \leq I_{OUT} \leq I_{MAX}$)	$V_{OUT} \leq 5 \text{ V}$	25	ΔV_{OUT}	--	5	15	mV
	$V_{OUT} \geq 5 \text{ V}$	25		--	0.1	0.3	%
	$V_{OUT} \leq 5 \text{ V}$	*		--	20	50	mV
	$V_{OUT} \geq 5 \text{ V}$	*		--	0.3	1.0	%
Thermal Regulation	20 msec Pulse	25		--	.002	.02	%/W
Ripple Rejection $V_{OUT} = 10 \text{ V}$, $f = 120 \text{ Hz}$	$C_{ADJ} = 0 \mu\text{F}$	25		--	65	--	dB
	$C_{ADJ} = 10 \mu\text{F}$	25		66	80	--	dB
Adjust Pin Current		*	I_{ADJ}	--	50	100	μA
Adjust Pin Current Change $10 \text{ mA} \leq I_{OUT} \leq I_{MAX}$, $2.5 \text{ V} \leq \Delta V \leq 60 \text{ V}$		*	ΔI_{ADJ}	--	0.2	5	μA
Minimum Load Current	$\Delta V \leq 60 \text{ V}$	*		--	3.5	7.0	mA
Temperature Stability $-55^\circ\text{C} \leq T_J \leq +150^\circ\text{C}$		*	$\frac{\Delta V_{OUT}}{\Delta T}$	--	1	2	%
Long Term Stability		125	$\frac{\Delta V_{OUT}}{\Delta V_{time}}$	--	0.3	1.0	%
RMS Output Noise (% of V_{OUT})	$10 \text{ Hz} \leq f \leq 10 \text{ kHz}$	25	e_n	--	0.001	--	%
Thermal Resistance Junction to Case	Packages J, M, and Z		$R_{\theta JC}$	--	--	4.0	$^\circ\text{C/W}$
	Packages G, S.5, and S1			--	--	2.5	$^\circ\text{C/W}$



Notes: *Full Temperature Range

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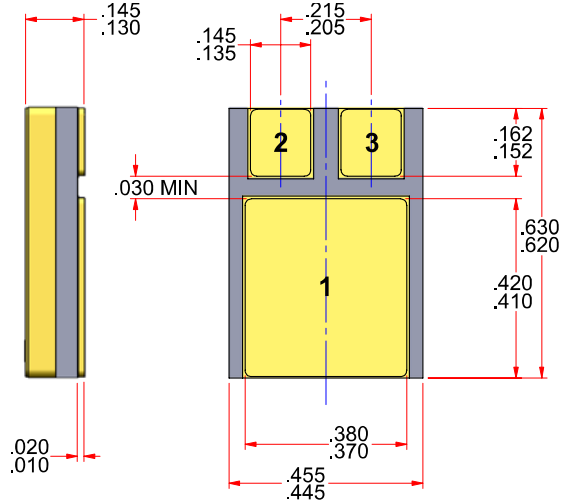


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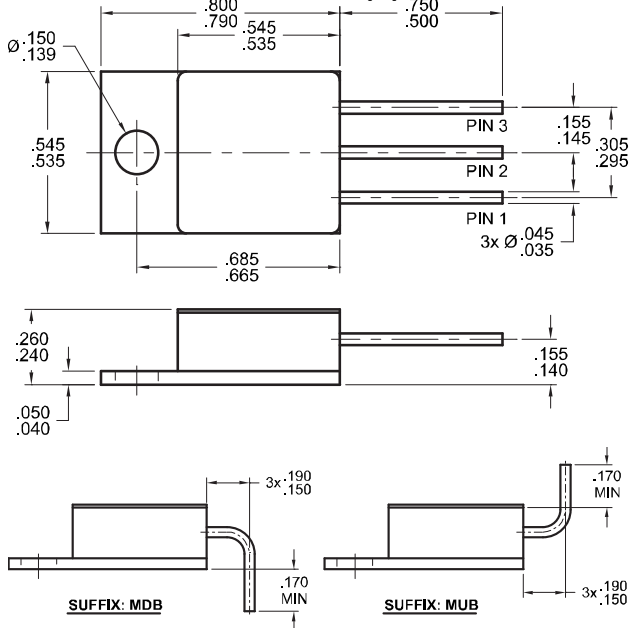
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SMD1 (S1)



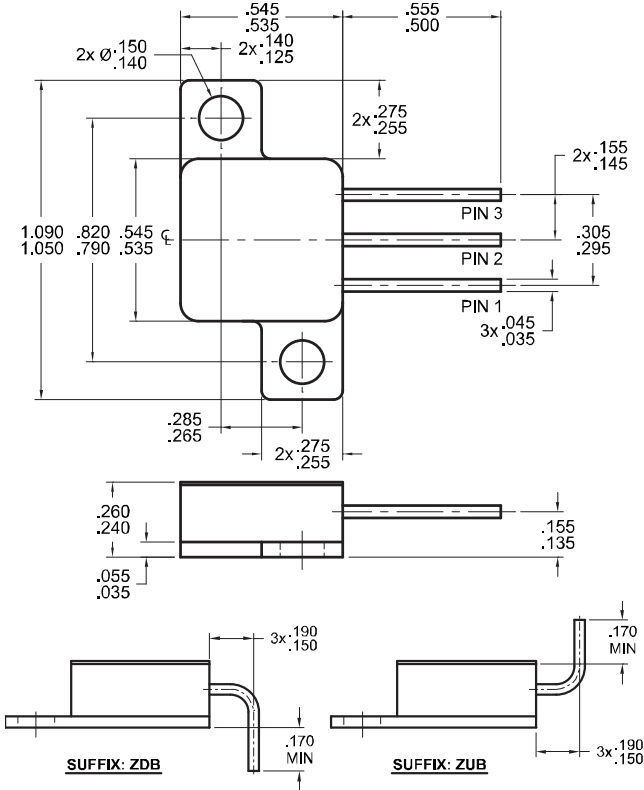
TO-254 (M)



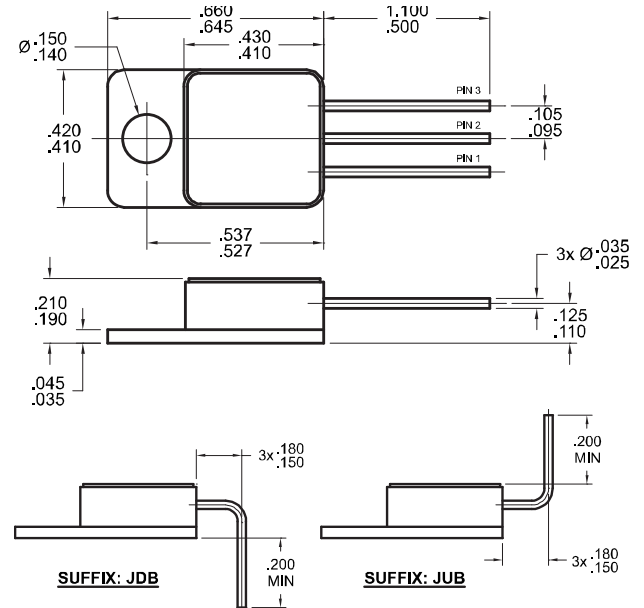
PIN ASSIGNMENT

ADJUST	OUTPUT	INPUT
Pin 2	Pin 1	Pin 3

TO-254Z (Z)



TO-257 (J)



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