



Solid State Devices, Inc.

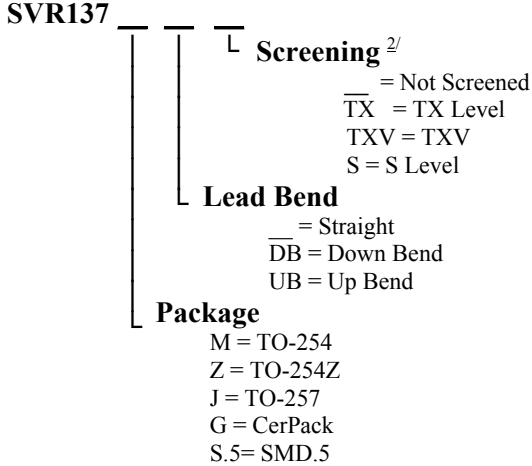
14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SVR137 Series

**1.5 AMP
 Negative Adjustable
 Linear Voltage Regulator
 40 Volts**

Designer's Data Sheet

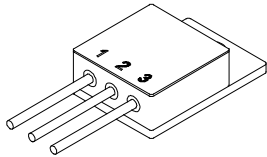
Part Number / Ordering Information ^{1/}



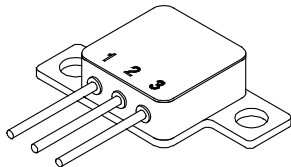
- Features:**
- Guaranteed 0.02% line regulation
 - Guaranteed 0.5% load regulation
 - Min 1.5A output current
 - Eutectic die attach
 - Superior to LM137 types
 - Complimentary use with LM117 types
 - Isolated hermetically sealed power package (M,Z,J)
 - 150°C operating temperature
 - Custom lead forming available (M,Z,J)
 - TX, TXV, and Space Level Screening Available

MAXIMUM RATINGS	Symbol	Value	Units
Power Dissipation ^{3/}	P _D	Internally Limited, 20	W
Input to Output Voltage Differential	ΔV _{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

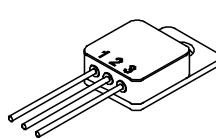
TO-254(M)



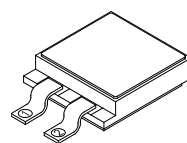
TO-254Z(Z)



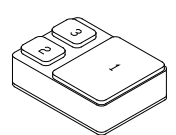
TO-257(J)



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: ΔV = 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 ^{3/}	Temp (°C)	Symbol	Min	Typ	Max	Unit	
Reference Voltage 10mA ≤ I _{OUT} ≤ I _{MAX} , 3V ≤ ΔV ≤ 40V, P ≤ P _{MAX}	25 *	V _{REF}	-1.225 -1.200	-1.250 -1.250	-1.275 -1.300	V	
Line Regulation ^{4/} 3V ≤ ΔV ≤ 40V	25 *	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	-- --	0.01 0.02	0.02 0.05	%/V	
Load Regulation ^{4/} 10mA ≤ I _{OUT} ≤ I _{MAX}	25 *	$\frac{\Delta V_{OUT}}{\Delta I_{OUT}}$	-- --	0.3 0.3	0.5 1.0	%	
Thermal Regulation 10 msec Pulse	25		--	.002	.02	%/W	
Ripple Rejection V _{OUT} = -10V, f = 120Hz	C _{ADJ} = 0	25	--	60	--	dB	
	C _{ADJ} = 10μF	25	66	77	--		
Adjust Pin Current	*	I _{ADJ}	--	65	100	μA	
Adjust Pin Current Change 10mA ≤ I _{OUT} ≤ I _{MAX} , 3.0V ≤ ΔV ≤ 40V	25	Δ I _{ADJ}	--	2	5	μA	
Minimum Load Current	ΔV ≤ 40V	*	--	2.5	5.0	mA	
	ΔV ≤ 10V			1.2	3.0		
Current Limit	ΔV ≤ 15V	*	1.5	2.2	-	A	
	ΔV = 40V		25	0.24	0.4		-
Temperature Stability -55°C ≤ T _J ≤ +150°C	*	$\frac{\Delta V_{OUT}}{\Delta T}$	--	0.6	--	%	
Long Term Stability 1000hrs	125	$\frac{\Delta V_{OUT}}{\Delta time}$	--	0.3	1.0	%	
RMS Output Noise % of V _{OUT}	10Hz ≤ f ≤ 10kHz	25	e _n	--	0.003	--	%
Thermal Resistance Junction to Case	Package J, M, and Z Package G, S, 5	R _{θJC}	--	--	4.0	°C/W	
			--	--	2.5		

Notes:

*Full Temperature Range

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3/ Unless otherwise specified, these specifications apply: ΔV = 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.

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

DATA SHEET #: LA0011B

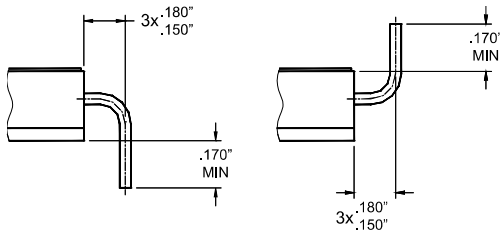
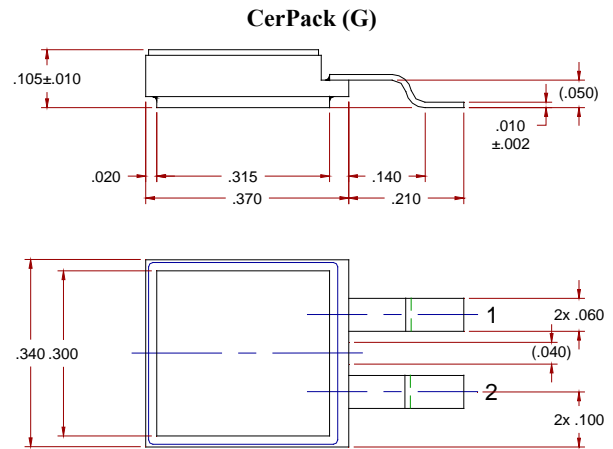
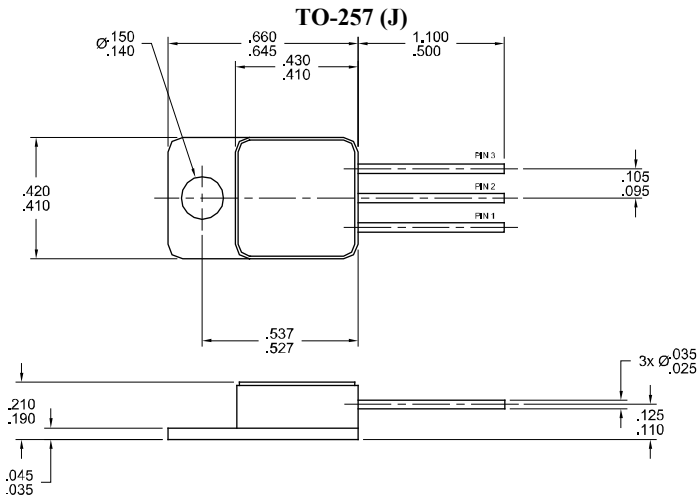
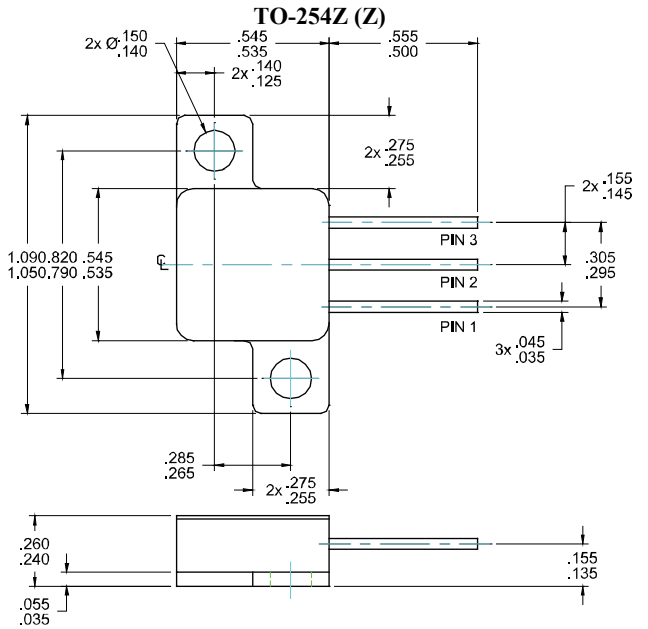
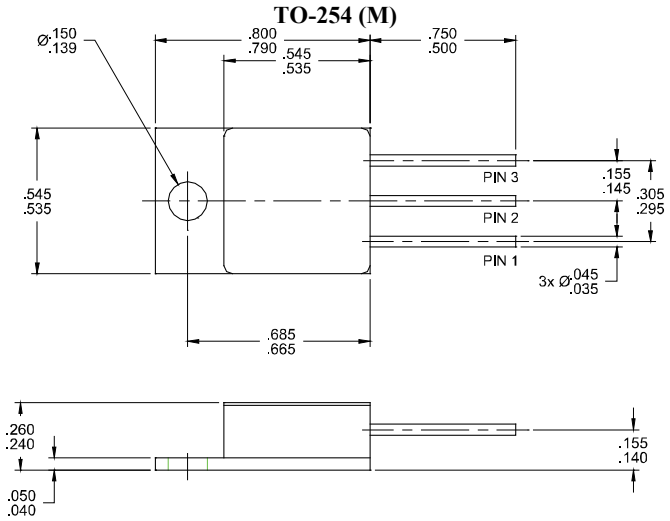
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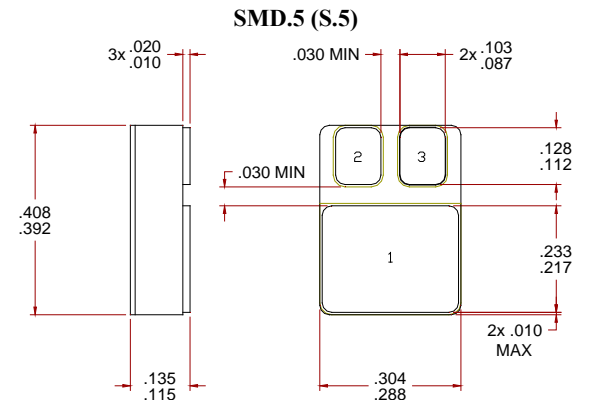
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PIN ASSIGNMENT

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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