



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

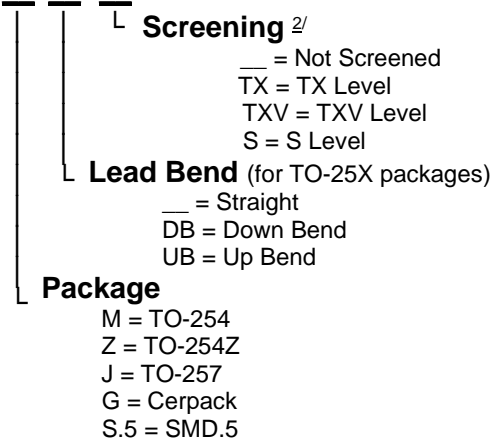
SVR137 Series

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

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SVR137

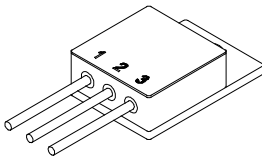


Features:

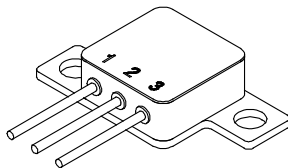
- Guaranteed 0.02% Line Regulation
- Guaranteed 0.5% Load Regulation
- Min 1.5 A Output Current
- Eutectic Die Attach
- Superior to LM137 Types
- Complimentary Use with LM117 Types
- Isolated Hermetically Sealed Power Package (M,Z,J)
- 150°C Operating Temperature
- Custom Lead Forming Available (M,Z,J)
- TX, TXV, and Space Level Screening Available

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

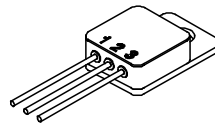
TO-254 (M)



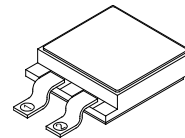
TO-254Z (Z)



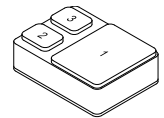
TO-257 (J)



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

^{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.

DATA SHEET #: LA0011C

DOCX



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ELECTRICAL CHARACTERISTICS ^{3/}	Temp (°C)	Symbol	Min	Typ	Max	Unit	
Reference Voltage 10 mA ≤ I _{OUT} ≤ I _{MAX} , 3 V ≤ ΔV ≤ 40 V, P ≤ P _{MAX}	25 *	V _{REF}	-1.225 -1.200	-1.250 -1.250	-1.275 -1.300	V	
Line Regulation^{4/} 3 V ≤ ΔV ≤ 40 V	25 *	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	-- --	0.01 0.02	0.02 0.05	%/V	
Load Regulation^{4/} 10 mA ≤ 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} = -10 V, f = 120 Hz	C _{ADJ} = 0 25 C _{ADJ} = 10 μF 25		-- 66	60 77	-- --	dB	
Adjust Pin Current	*	I _{ADJ}	--	65	100	μA	
Adjust Pin Current Change 10 mA ≤ I _{OUT} ≤ I _{MAX} , 3.0 V ≤ ΔV ≤ 40 V	25	Δ I _{ADJ}	--	2	5	μA	
Minimum Load Current							
	ΔV ≤ 40 V ΔV ≤ 10 V	*	-- --	2.5 1.2	5.0 3.0	mA	
Current Limit	ΔV ≤ 15 V ΔV = 40 V	* 25	1.50 0.24	2.2 0.4	- -	A	
Temperature Stability -55°C ≤ T _J ≤ +150°C	*	$\frac{\Delta V_{OUT}}{\Delta T}$	--	0.6	--	%	
Long Term Stability 1000 hrs	125	$\frac{\Delta V_{OUT}}{\Delta time}$	--	0.3	1.0	%	
RMS Output Noise % of V _{OUT}	10 Hz ≤ f ≤ 10 kHz	25	e _n	--	0.003	--	%
Thermal Resistance Junction to Case	Package J, M, and Z Package G, S.5		R _{θJC}	-- --	-- --	4.0 2.5	°C/W

Notes:

*Full Temperature Range

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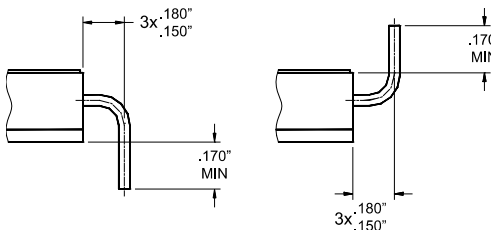
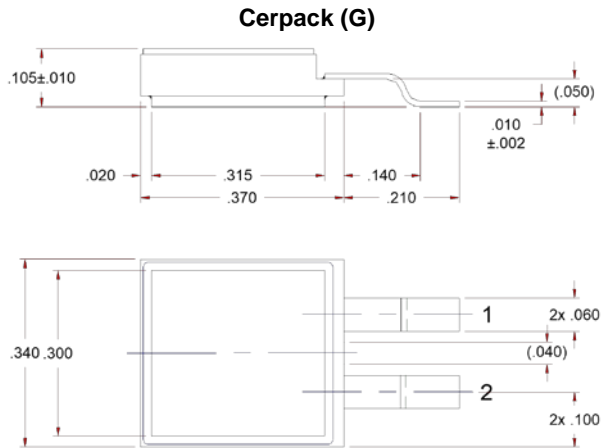
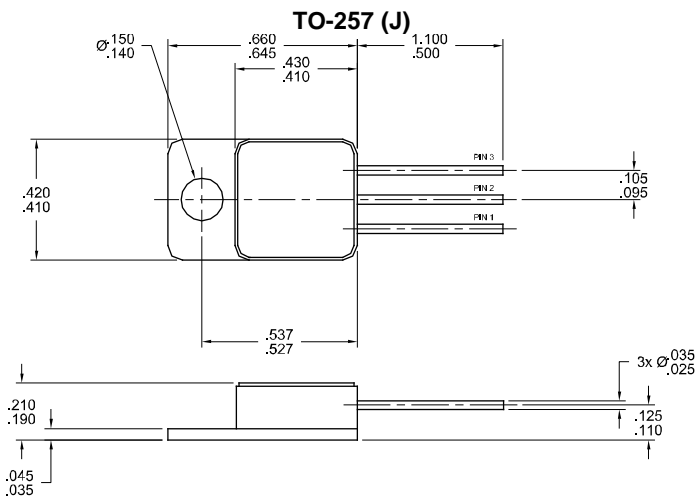
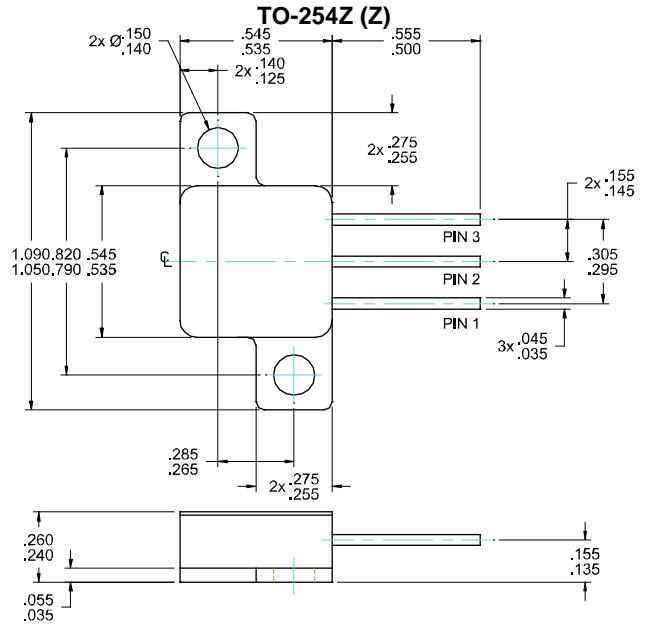
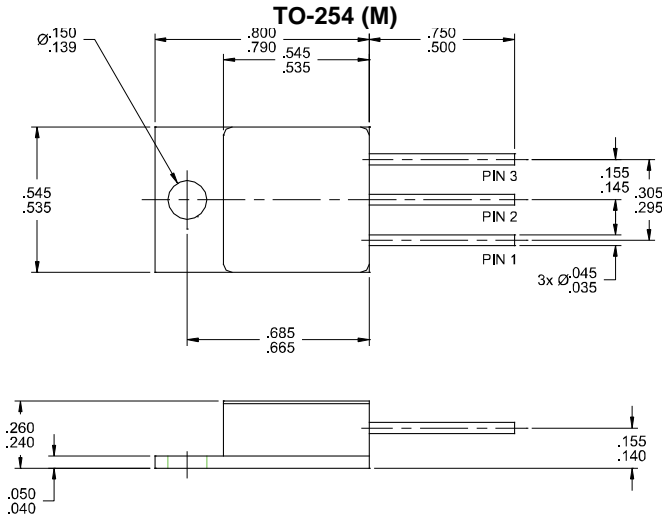
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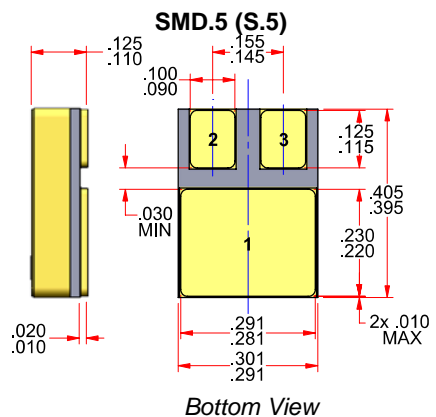
SVR137 Series



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

Bottom View



Bottom View

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