



# SOLID STATE DEVICES, INC.

14830 Valley View Blvd \* La Mirada, Ca 90638

Phone: (562) 404-7855 \* Fax: (562) 404-1773

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## SVR1118 SERIES

### 800 mAmps /2.5 thru 5Volts FIXED LOW DROPOUT LINEAR VOLTAGE REGULATOR

### Designer's Data Sheet

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

SVR1118 - 2.5 J DB H- Screening <sup>2/</sup>: \_ = Not Screened

H = High Rel Level  
K = Space Level  
R = Radiation Tolerant

Lead Bend: <sup>3/</sup> \_ = Straight

DB = Down Bend  
UB = Up Bend  
Z = Z Bend

Package: <sup>4/</sup> J = TO-257

G = CerPack  
S.5 = SMD.5  
-28= LCC 28

Voltage: 2.5 = 2.5V

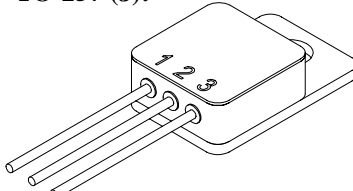
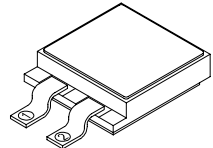
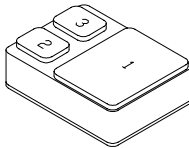
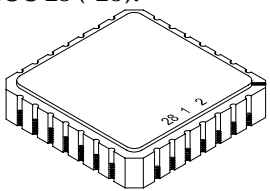
2.85= 2.85V

5 = 5V

#### FEATURES:

- Replacement for LT1118 Types
- Eutectic Die Attach
- Regulates While Sourcing or Sinking Current
- Ultra Low Power Shutdown Mode
- Stable for Any  $C_{LOAD} \geq 0.22\mu F$
- Fast Settling Time
- Isolated Hermetically Sealed Power Package
- High Thermally Conductive Package
- Reduced Heatsinking Required
- 150°C Operating Temperature
- Custom Lead Forming Available
- Class H or K (Space) Screening Available
- Radiation Tolerant Devices are Available

MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Supply Voltage	V <sub>CC</sub>	15	V
Input Voltage	V <sub>IN</sub>	-0.2 to 7	V
Output Voltage	V <sub>OUT</sub>	-0.2 to V <sub>CC</sub> + 0.5	V
Operating Temperature	T <sub>OP</sub>	-55 to +150	°C
Storage Temperature	T <sub>STG</sub>	-65 to +150	°C

<b>TO-257 (J):</b> 	<b>CerPack (G):</b> 	<b>SMD.5 (S.5):</b> 	<b>LCC 28 (-28):</b> 
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FOR PACKAGE OUTLINE REQUEST FOLLOWING DOCUMENTS	
PACKAGE	DOCUMENT
TO-257 (J, JDB, JUB)	60-0149-504
CerPack (G, GZB)	60-0149-366
SMD.5 (S.5)	60-0149-507
LCC28 (-28)	60-0149-342

PIN ASSIGNMENT			
PACKAGE	Vout	Gnd	Vin
TO-257 (J)	Pin 1	Pin 2	Pin 3
CerPack (G)	Pin 1	Base	Pin 2
SMD.5 (S.5)	Pin 2	Pin 1	Pin 3
LCC 28 (-28)	1, 15 - 28	5 - 11	2, 3, 13, 14

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

**DATA SHEET #: SVR005A**

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Electrical Characteristics <sup>4/</sup>			t°	SYMBOL	MIN	TYP	MAX	UNITS
Quiescent Current		V <sub>IN</sub> = 5V	*	V <sub>IN</sub>	--	0.6	1.0	mA
		V <sub>IN</sub> = 0V	*	V <sub>IN</sub>	--	1.0	10	μA
Enable Input Thresholds		Input Low Level	*		0.4	1.4	--	V
		Input High Level	*		--	1.4	2	V
Output Voltage	SVR1118-2.5	No Load	25	V <sub>OUT</sub>	2.47	2.5	2.53	V
		All Operating Conditions <sup>5/</sup>	*		2.45	2.5	2.55	V
	SVR1118-2.85	No Load	25		2.82	2.85	2.88	V
		All Operating Conditions <sup>5/</sup>	*		2.79	2.85	2.91	V
SVR1118-5	No Load	25	4.95	5.0	5.05	V		
	All Operating Conditions <sup>5/</sup>	*	4.90	5.0	5.10	V		
Line Regulation (I <sub>OUT</sub> = 0A)	SVR1118-2.5	(4.2V ≤ V <sub>IN</sub> ≤ 15V)	*	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	--	--	6.0	mV
	SVR1118-2.85	(4.75V ≤ V <sub>IN</sub> ≤ 15V)	*		--	--	6.0	mV
	SVR1118-5	(6.5V ≤ V <sub>IN</sub> ≤ 20V)	*		--	--	10	mV
Load Regulation <sup>6/</sup>	SVR1118-2.5	(0 ≤ I <sub>OUT</sub> ≤ 800mA)	*	$\frac{\Delta V_{OUT}}{\Delta I_{OUT}}$	--	--	10	mV
		(-400mA ≤ I <sub>OUT</sub> ≤ 0)	*		--	--	10	mV
	SVR1118-2.85	(0 ≤ I <sub>OUT</sub> ≤ 800mA)	*		--	--	10	mV
		(-400mA ≤ I <sub>OUT</sub> ≤ 0)	*		--	--	10	mV
	SVR1118-5	(0 ≤ I <sub>OUT</sub> ≤ 800mA)	*		--	--	25	mV
		(-400mA ≤ I <sub>OUT</sub> ≤ 0)	*		--	--	25	mV
Dropout Voltage <sup>7/</sup>		(I <sub>OUT</sub> = 100mA)	25	ΔV	--	0.85	1.1	V
		(I <sub>OUT</sub> = 800mA)	25		--	1.0	1.3	V
Ripple Rejection		(f <sub>RIPPLE</sub> = 120Hz, V <sub>RIPPLE</sub> = 0.5V <sub>P-P</sub> , ΔV = 2V)	25 25		60	80	--	dB
Load Transient Settling Time ΔV = 25V; C <sub>LOAD</sub> = 1μF		(0 ≤ I <sub>OUT</sub> ≤ 800mA)	25		--	5	--	μsec
		(-400mA ≤ I <sub>OUT</sub> ≤ 0)	25		--	5	--	μsec
Output Short Circuit Current		(V <sub>OUT</sub> = 0)		I <sub>SC</sub> <sup>+</sup>	800	1200	--	mA
		(V <sub>OUT</sub> = V <sub>IN</sub> )		I <sub>SC</sub> <sup>-</sup>	--	-700	- 400	mA
Thermal Shutdown Junction Temperature		No Load			--	170	--	°C
Enable Turn-On Delay		No Load			--	50	--	μsec

## NOTES:

\* Full Temperature Range

<sup>1/</sup> For Ordering Information, Price, and Availability Contact Factory.

<sup>2/</sup> Screening per MIL-PRF-19500.

<sup>3/</sup> For Package Outlines and Lead Bend Options Contact Factory

<sup>4/</sup> Unless Otherwise Specified, testing done at V<sub>CC</sub> = 5V (for SVR1118-2.5 and SVR1118-2.85) and at V<sub>CC</sub> = 7V (for SVR1118-5); C<sub>LOAD</sub> = 1μF; I<sub>LOAD</sub> = 0.

<sup>5/</sup> All Operating Conditions include the combined effects of Load Current, Input Voltage, and Temperature over each parameter's full range.

<sup>6/</sup> Load and Line Regulation are tested at a constant junction temperature by low duty cycle pulse testing.

<sup>7/</sup> Dropout Voltage is defined as a minimum Input to Output Voltage measured while sourcing the specified current.