SOLID STATE DEVICES, INC.
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SVR1118 SERIES

Designer's Data Sheet

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

Part Number /Ordering Information [1/]

SVR1118 - 2.5 J DB H –

Screening [2/]**:** _ = Not Screened
H = High Rel Level
K = Space Level
R = Radiation Tolerant

Lead Bend: [3/] _ = Straight
DB = Down Bend
UB = Up Bend
Z = Z Bend

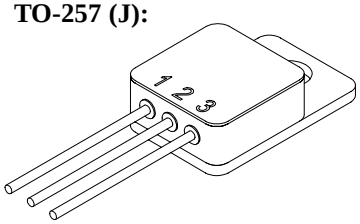
Package: [4/] J = TO-257
G = CerPack
S.5 = SMD.5
-28= LCC 28

Voltage: 2.5 = 2.5V
2.85= 2.85V
5 = 5V

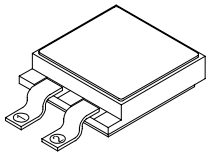
FEATURES:
- **Replacement for LT1118 Types**
- **Eutectic Die Attach**
- **Regulates While Sourcing or Sinking Current**
- **Ultra Low Power Shutdown Mode**
- **Stable for Any $C_{LOAD} \geq 0.22\mu F$**
- **Fast Settling Time**
- **Isolated Hermetically Sealed Power Package**
- **High Thermally Conductive 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_{CC}	15	V
Input Voltage	V_{IN}	-0.2 to 7	V
Output Voltage	V_{OUT}	-0.2 to V_{CC} + 0.5	V
Operating Temperature	T_{OP}	-55 to +150	°C
Storage Temperature	T_{STG}	-65 to +150	°C

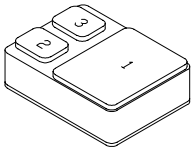
TO-257 (J):



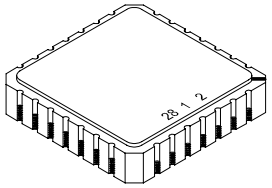
CerPack (G):



SMD.5 (S.5):



LCC 28 (-28):



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

NOTES:

* Full Temperature Range

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

2/ Screening per MIL-PRF-19500.

3/ For Package Outlines and Lead Bend Options Contact Factory

4/ Unless Otherwise Specified, testing done at V_{CC} = 5V (for SVR1118-2.5 and SVR1118-2.85) and at V_{CC} = 7V (for SVR1118-5); C_{LOAD} = 1µF; I_{LOAD} = 0.

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

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

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