**SOLID STATE DEVICES, INC.**
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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** [1/]

**SVR1118 - 2.5 J DB H**

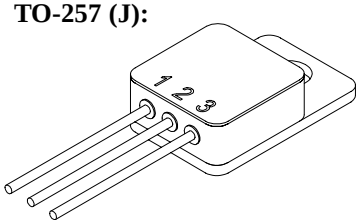
- **Screening** [2/]: _ = Not Screened, H = High Rel Level, K = Space Level, R = Radiation Tolerant
- **Lead Bend:** [3/] _ = Straight, DB = Down Bend, UB = Up Bend, Z = Z Bend
- **Package:** [4/] J = TO-257, G = CerPack, S.5 = SMD.5, -28= LCC 28
- **Voltage:** 2.5 = 2.5V, 2.85= 2.85V, 5 = 5V

**FEATURES:**

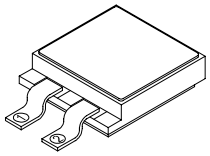
- **Replacement for LT1118 Types**
- **Eutectic Die Attach**
- **Regulates While Sourcing or Sinking Current**
- **Ultra Low Power Shutdown Mode**
- **Stable for Any $C_{LOAD} \geq 0.22\mu F$**
- **Fast Settling Time**
- **Isolated Hermetically Sealed Power Package**
- **High Thermally Conductive Package**
- **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 |

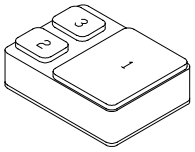
**TO-257 (J):**



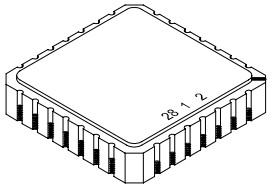

**CerPack (G):**



**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 | $\Delta V$ | -- | 0.85 | 1.1 | V |
| | | ($I_{OUT}$ = 800mA) | 25 | | -- | 1.0 | 1.3 | V |
| **Ripple Rejection** | | ($f_{RIPPLE}$ = 120Hz, | 25 | | 60 | 80 | -- | dB |
| | | $V_{RIPPLE}$ = 0.5$V_{P-P}$, $\Delta V$=2V) | 25 | | | | | |
| **Load Transient Settling Time** | | (0≤$I_{OUT}$≤800mA) | 25 | | -- | 5 | -- | µsec |
| $\Delta V$ = 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.