



SOLID STATE DEVICES, INC.

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SVR117A SERIES

Designer's Data Sheet

1.5 Amp / 40 Volts POSITIVE ADJUSTABLE LINEAR VOLTAGE REGULATOR

Part Number /Ordering Information ^{1/}
SVR117A M DB H

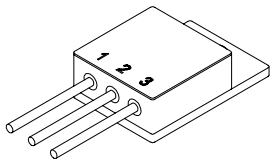
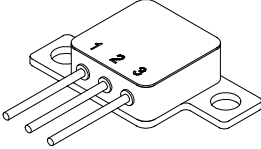
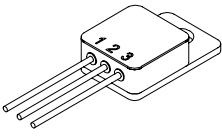
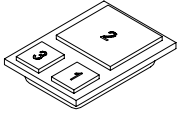
Screening ^{2/}:
 (None) = Not Screened
 H = High Rel Level
 K = Space Level

Lead Bend: ^{3/}
 (None) = Straight
 DB = Down Bend
 UB = Up Bend

Package: ^{3/}
 M = TO-254
 Z = TO-254Z
 J = TO-257
 E = MilPack I

- FEATURES:**
- Guaranteed 1% Output Voltage Tolerance
 - Guaranteed 0.01% Line Regulation
 - Guaranteed 0.3% Load Regulation
 - Min 1.5A Output Current
 - Eutectic Die Attach
 - Superior to LM117 Types
 - Complimentary use with LM137 Types
 - Isolated Hermetically Sealed Power Package
 - 150°C Operating Temperature
 - Custom Lead Forming Available
 - Class H or K (Space) Screening Available

MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Power Dissipation ^{4/}	P _D	Internally Limited, 20	W
Input to Output Voltage Differential	ΔV _{IN/OUT}	40	V
Maximum Current Load	I _{OUT}	1.5	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): 	MilPack I (E): 
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PIN ASSIGNMENT			
FUNCTION	PIN 1	PIN 2	PIN 3
Voltage Regulator	Adjust	Output	Input

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

DATA SHEET #: LA0005C

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Electrical Characteristics ^{4/}	t°	SYMBOL	MIN	TYP	MAX	UNITS
Reference Voltage $\Delta V = 5V, I_{OUT} = 10mA$ $10mA \leq I_{OUT} \leq I_{MAX}, 3V \leq \Delta V \leq 40V, P \leq P_{MAX}$	25 *	V_{REF}	1.238 1.225	1.250 -1.250	1.262 1.270	V V
Line Regulation ^{5/} ($3V \leq \Delta V \leq 40V$)	25 *	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	-- --	0.005 0.01	0.010 0.02	%/V %/V
Load Regulation ^{5/} ($10mA \leq I_{OUT} \leq I_{MAX}$)	$V_{OUT} \leq 5V$	$\frac{\Delta V_{OUT}}{\Delta I_{OUT}}$	--	5	15	mV
	$V_{OUT} \geq 5V$		--	0.1	0.3	%
	$V_{OUT} \leq 5V$		--	20	50	mV
	$V_{OUT} \geq 5V$		--	0.3	1.0	%
Thermal Regulation 20 msec Pulse	25		--	.002	.02	%/W
Ripple Rejection $V_{OUT} = -10V, f=120Hz$	$C_{ADJ} = 0$	25	-	65	--	dB
	$C_{ADJ} = 10\mu F$	25	66	80	--	dB
Adjust Pin Current	*	I_{ADJ}	--	50	100	μA
Adjust Pin Current Change $10mA \leq I_{OUT} \leq I_{MAX}, 2.5V \leq \Delta V \leq 40V$	*	ΔI_{ADJ}	--	0.2	5	μA
Minimum Load Current $\Delta V \leq 40V$	*		--	3.5	5.0	mA
Temperature Stability $-55^{\circ}C \leq T_J \leq +150^{\circ}C$	*	$\frac{\Delta V_{OUT}}{\Delta T}$	--	1	2	%
Long Term Stability	125	$\frac{\Delta V_{OUT}}{\Delta V_{time}}$	--	0.3	1.0	%
RMS Output Noise (% of V_{OUT}) $10 Hz \leq f \leq 10 kHz$	25	e_n	--	0.001	--	%
Thermal Resistance Junction to Case		$R_{\theta JC}$	--	--	4.0	$^{\circ}C/W$
			--	--	2.5	$^{\circ}C/W$

NOTES:

- * Full Temperature Range
- 1/ For Ordering Information, Price, and Availability Contact Factory.
- 2/ Screening per MIL-STD-883.
- 3/ For Package Outline and Lead Bend Dimensions Consult Factory.
- 4/ Unless otherwise specified, these specifications apply: $\Delta V = 5V$ and $I_{OUT} = 0.5A$. Power dissipation is internally limited. However, these specifications apply for power dissipation up to 20W, $I_{MAX} = 1.5A$.
- 5/ Testing is done using a pulsed low duty cycle technique.