



# SOLID STATE DEVICES, INC.

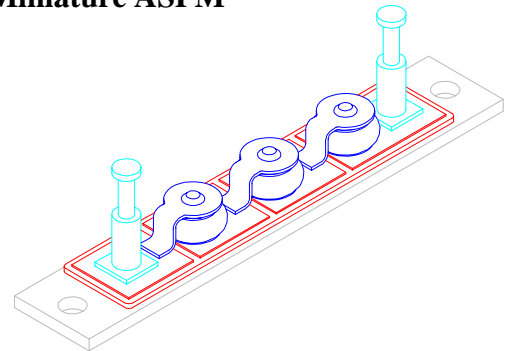
14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

## DESIGNER'S DATA SHEET

# SPMR534 SERIES

**60 A / 3000V  
HIGH CURRENT/HIGH VOLTAGE  
RECTIFIER POWER MODULE**

### Miniature ASPM



Actual Size

### FEATURES:

- Radiation Tolerant Design
- High Current/High Voltage
- Avalanche Breakdown
- Proven Space Flight Heritage
- Compact and Rugged Construction Offering Weight and Space Savings and Very Low Mechanical Stress
- Low Thermal Resistance: 0.45 °C/W
- Hermetic Sealed Discrete Elements
- TX, TXV, and S-Level Screening Available
- Parelene Coating or Epoxy Encapsulation Available
- Other Terminal Configuration Available. Consult Factory

### MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE			UNIT
		Standard	Fast	Ultra Fast	
Peak Repetitive Reverse and DC Blocking Voltage	$V_{RWM}$ $V_R$	1800	1800	1800	Volts
		2500	2500	2500	
		3000	3000	3000	
Average Rectified Forward Current (Non-repetitive, t = 8.3 ms Pulse)	$I_O$	60	56	50	Amps
Peak Surge Current (Non-repetitive, t = 8.3 ms Pulse, $T_A = 25^\circ\text{C}$ )	$I_{FSM}$	300	250	225	Amps
Operating Temperature Range	$T_{OP}$	-65 TO +175	-65 TO +165	-65 TO +150	°C
Storage Temperature Range	$T_{STG}$	-65 TO +175	-65 TO +175	-65 TO +175	°C
Thermal Resistance, Junction to Base	$\theta_{JB}$	0.45	0.45	0.45	°C/W

### Available Part Numbers:

SPMR534-18ST, SPMR534-18FT, SPMR534-18UFT  
 SPMR534-25ST, SPMR534-25FT, SPMR534-25UFT  
 SPMR534-30ST, SPMR534-30FT, SPMR534-30UFT

### Part Number /Ordering Information

SPMR534- 18 UF T

**Terminal:** T = Turret

**Speed:** S = Standard Recovery

F = Fast

UF = Ultra Fast

**Voltage:** 18 = 1800V

25 = 2500V

30 = 3000V

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

**DATA SHEET #: PM0018A**

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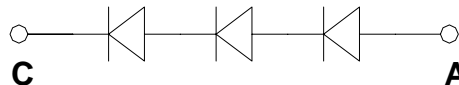
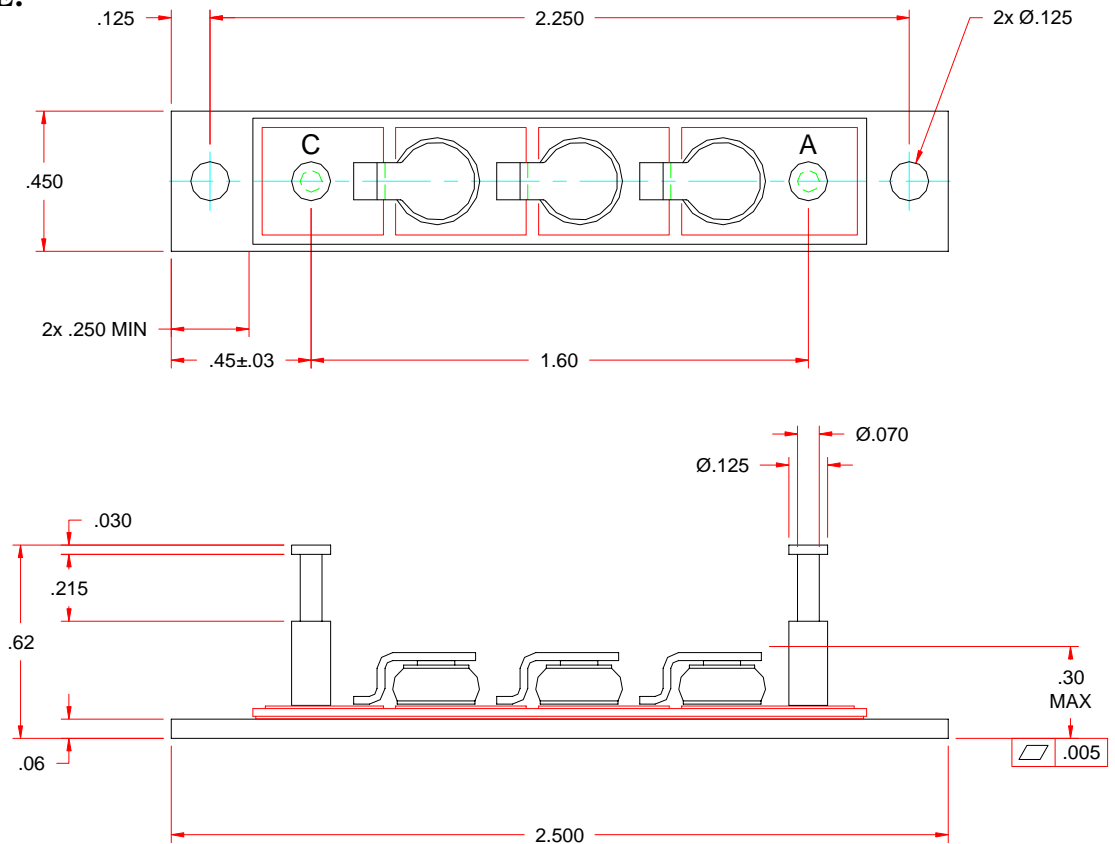
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## ELECTRICAL CHARACTERISTICS (per Section)

RATING	SYMBOL	Standard		Fast		Ultra Fast		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
<b>Forward Voltage</b> ( $T_A = 25^\circ\text{C}$ ) $I_F = 1/2$ Rated $I_F$ $I_F =$ Rated $I_F$	$V_{F1}$	--	3.10	--	4.00	--	4.80	V
	$V_{F2}$	--	3.80	--	5.00	--	6.00	
<b>Reverse Leakage Current</b> ( $V_R =$ Rated $V_R$ ) $T_A = 25^\circ\text{C}$ $T_A = +100^\circ\text{C}$	$I_{R1}$	--	10	--	20	--	50	$\mu\text{A}$
	$I_{R2}$	--	2.0	--	5.0	--	10	mA
<b>Reverse Recovery Time</b> ( $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{RR} = 0.25\text{A}$ )	$t_{RR}$	--	3000	--	200	--	80	nsec
<b>Insulation Resistance</b> (All terminals to Base @ $V_R = 1.5$ Rated $V_R$ )	$R_{INS}$	1.00	--	1.00	--	1.00	--	$\text{G}\Omega$

## PACKAGE OUTLINE:



### Tolerances:

(Unless specified):

.XX ±.03

.XXX ±.010