



# SOLID STATE DEVICES, INC.

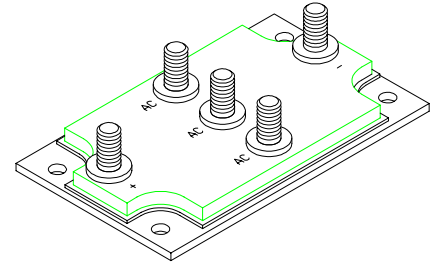
14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

## DESIGNER'S DATA SHEET

### SPMR527 Series

**320/400 Amps**  
**100/30 Volts**  
**3 PHASE BRIDGE**  
**POWER MODULE**

#### ASPM



#### FEATURES:

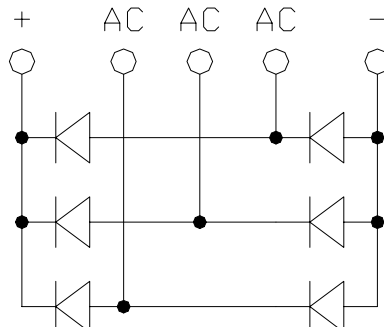
- 3 Phase High Current Schottky Rectifier Bridge
- No Minority Carrier Switching Loss
- Electrically Isolated Baseplate
- Hermetically Sealed Packaging
- Utilizes DBCu/Al<sub>2</sub>O<sub>3</sub> for Low Loss Operation
- Low Weight Al-SiC Baseplate
- Available with Male (M), Female (F) or Blade (B) terminals
- Screening to TX, TXV & S Level Available
- Available in the Following Configurations:

SPMR527M03,	SPMR527M04,	SPMR527M10,
SPMR527F03,	SPMR527F04,	SPMR527F10,
SPMR527B03,	SPMR527B04,	SPMR527B10

### MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE			UNIT
		-03	-04	-10	
Peak Reverse Voltage & DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	45	100	Volts
Average Rectified Forward Current. (Resistive load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$ )	$I_O$	400 150	400 150	320 120	Amps
Peak Surge Current (Non-repetitive, $t = 8.3$ ms Half Sine Wave Pulse)	$I_{FSM}$	1000	1000	1000	Amps
Operating & Storage Temperature Range	$T_{OP}$ & $T_{STG}$	-55 TO +175			$^\circ\text{C}$
Thermal Resistance, Junction to Base per Bridge per Leg	$\theta_{JBc}$	0.14 0.85	0.14 0.85	0.14 0.85	$^\circ\text{C/W}$

### ELECTRICAL SCHEMATIC SPMR527



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

**DATA SHEET #: PM0014A**

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## ELECTRICAL CHARACTERISTICS (per Leg)

RATING	SYMBOL	MAX			UNIT	
		-03	-04	-10		
<b>Forward Voltage Drop</b> ( $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse )	$I_F = 1/3$ of Rated $I_O$ per Leg	$V_{F1}$	<b>0.46</b>	<b>0.55</b>	<b>0.71</b>	$V_{DC}$
	$I_F =$ Rated $I_O$ per Leg	$V_{F2}$	<b>0.65</b>	<b>0.78</b>	<b>0.91</b>	
<b>Forward Voltage Drop</b> ( $I_F =$ Rated $I_O$ per Leg, $T_C = 125^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse )		$V_{F3}$	<b>0.60</b>	<b>0.73</b>	<b>0.74</b>	$V_{DC}$
<b>Reverse Leakage Current</b> (Rated $V_R$ , 300 $\mu\text{s}$ pulse min.)	$T_A = 25^\circ\text{C}$	$I_{R1}$	<b>7.5</b>	<b>12</b>	<b>5.0</b>	mA
	$T_A = 125^\circ\text{C}$	$I_{R2}$	<b>500</b>	<b>500</b>	<b>100</b>	
<b>Junction Capacitance</b> ( $V_R = 5V_{DC}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )		$C_J$	<b>7500</b>	<b>7500</b>	<b>3200</b>	pF
<b>Isolation Leakage Current</b> (All terminals in Common to Base @500V)		$R_{ISO}$	<b>500</b>	<b>500</b>	<b>500</b>	nA

## PACKAGE OUTLINE: SPMR527

### NOTES:

(Unless otherwise specified)

All dimensions are in inches

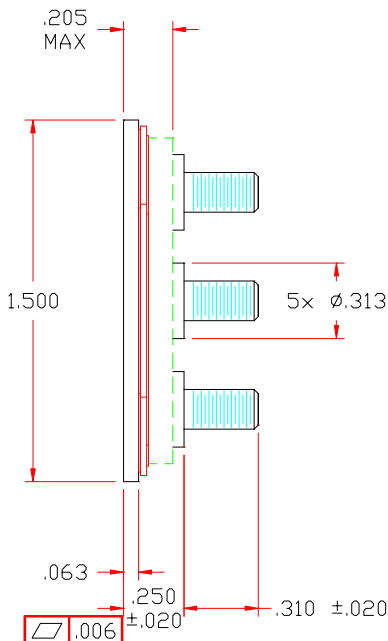
Tolerances (Unless specified):

.XX  $\pm .03$

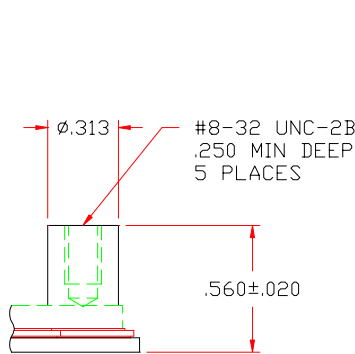
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Contact Factory for Outline with Other  
Terminals

### Terminal Option M



### Terminal Option F



### Terminal Option B

