



# SOLID STATE DEVICES, INC.

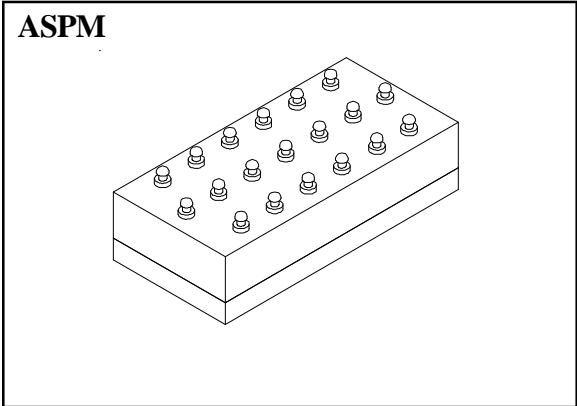
14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

## DESIGNER'S DATA SHEET

# SPX2090

## 1 AMP/15,000 VOLTS HIGH VOLTAGE RECTIFIER BRIDGE STACK

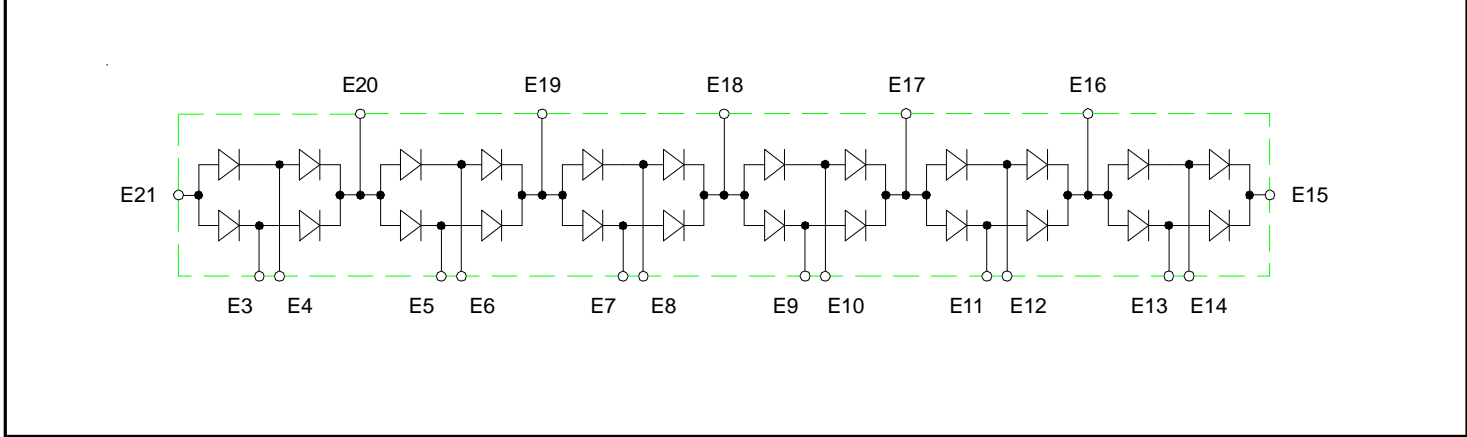
- FEATURES:**
- Aerospace High Voltage Power Supply Applications.
  - High Blocking Voltage - 15kV minimum.
  - Low Mechanical Stress Design.
  - Excellent Thermal Management - 2.5°C/W.
  - TX, TXV, and Space Level Screening Available.
  - Consult Factory for:
    - Higher Blocking Voltages;
    - Faster Switching Speeds;
    - Other Electrical Configurations;
    - Available with a sandblasted case to promote adhesion, add "SAB" suffix.



## MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage (each bridge)	$V_R$	3,300	Volts
Average Rectified Forward Current (Non-repetitive, t = 8.3 ms Pulse)	$I_O$	1	Amps
Peak Surge Current (Non-repetitive, t = 8.3 ms Pulse, T <sub>A</sub> = 25°C)	$I_{FSM}$	25	Amps
Operating Temperature Range	T <sub>OP</sub>	-65 TO +150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 TO +150	°C
Thermal Resistance, Junction to Base	q <sub>JB</sub>	2.5	°C/W

## ELECTRICAL SCHEMATIC



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

**DATA SHEET #: PM0015B**

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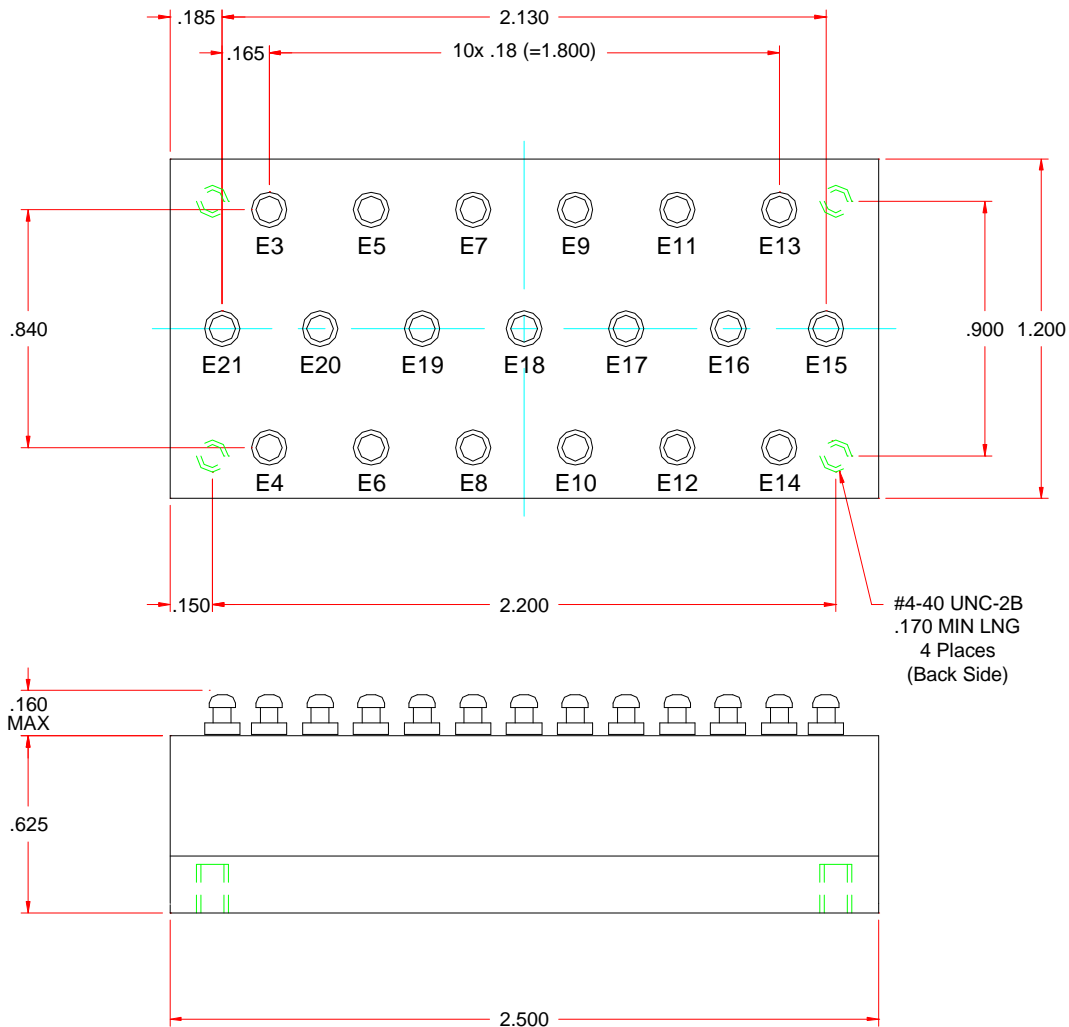
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### ELECTRICAL CHARACTERISTICS, Each Bridge Leg, @ $T_A = 25^\circ\text{C}$ (Unless Otherwise Specified)

PARAMETER	SYMBOL	MIN	MAX	UNIT
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 1.0\text{A}$ , 300 $\mu\text{sec}$ Pulse minimum )	$V_{F1}$	-	7.5	Volts
<b>Reverse Leakage</b> ( $V_R = 2500\text{V}$ , 300 $\mu\text{sec}$ Pulse minimum )	$I_{R1}$ $I_{R2}$	- -	1.0 50	$\mu\text{Amps}$
<b>Insulation Resistance</b> (All terminals to Base @ 15,000V)	$R_{\text{INSUL1}}$	10	-	$\text{G}\Omega$
<b>Reverse Recovery Time</b> ( $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{RR} = 0.25\text{A}$ )	$t_{RR}$	-	60	nsec

### PACKAGE OUTLINE: ASPM



Tolerances  
(Unless specified):

.XX  $\pm .03$   
 .XXX  $\pm .010$