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

SPX2091

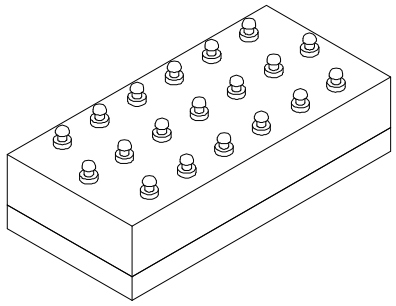
Designer's Data Sheet

1 AMP
9,300 VOLTS
HIGH VOLTAGE
RECTIFIER BRIDGE STACK

FEATURES:

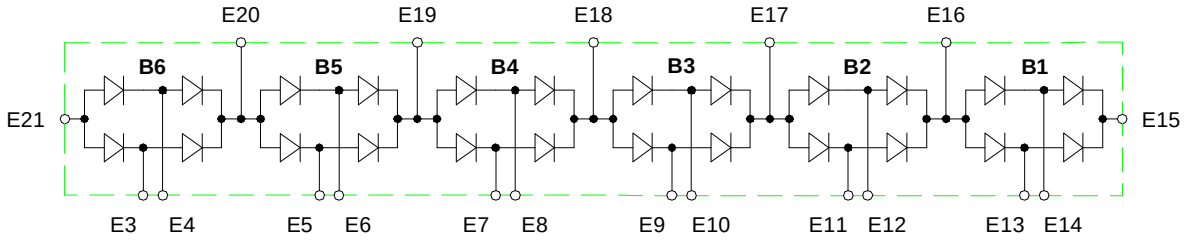
- Aerospace High Voltage Power Supply Applications
- High Blocking Voltage – 9,300 V Minimum
- Low Mechanical Stress Design
- Excellent Thermal Management – 2.5 °C/W
- TX, TXV, and Space Level Screening Available.
- Consult Factory for:
  - Higher Blocking Voltages
  - Faster Switching Speeds
  - Other Electrical Configurations
  - Available with a sandblasted case to promote adhesion, add "SAB" suffix.

ASPM



MAXIMUM RATINGS		Symbol	Value	Units
Peak Inverse Voltage (Each Bridge)	**B1** **B2-B6**	V_R	3,300 1,200	**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_A = 25°C)		I_{FSM}	25	**Amps**
Operating Temperature Range		T_{OP}	-65 to +150	**°C**
Storage Temperature Range		T_{stg}	-65 to +150	**°C**
Maximum Thermal Resistance (Junction to Base)		R_{qJB}	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 #: PM0023D**	**DOC**

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

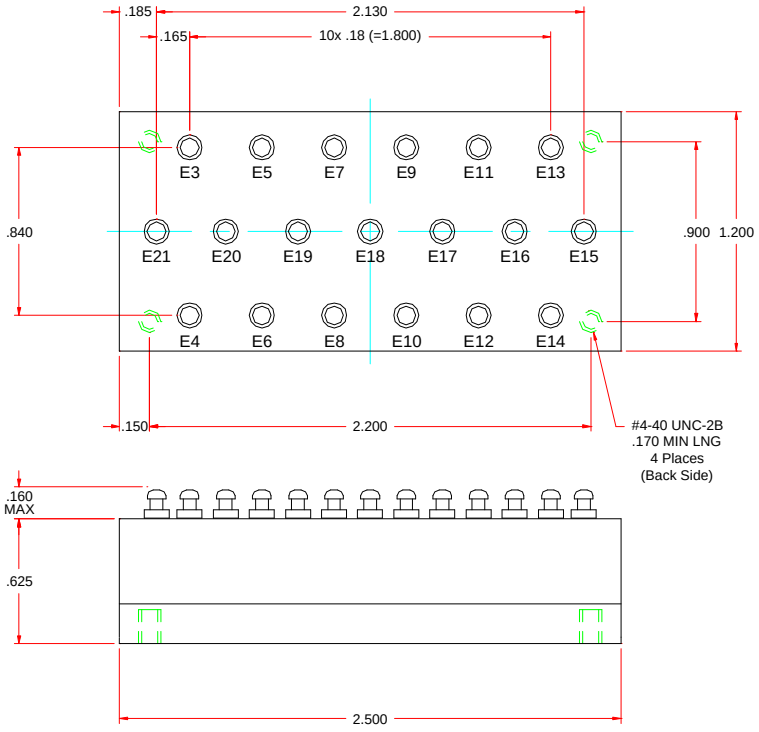
SPX2091

ELECTRICAL CHARACTERISTICS 1/		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (I_F = 1.0 A, 300 – 500 µsec Pulse)	B1 B2-B6	V_{F1} V_{F2}	— —	— —	7.5 2.5	**Volts**
Instantaneous Forward Voltage Drop (I_F = 0.35 A, T_A = 100ºC, 300 – 500 µsec Pulse)	B2-B6	V_{F3}	—	—	1.3	**Volts**
Reverse Leakage Current (T_A = 25ºC, 300 – 500 µsec Pulse)	B1: V_R = 2500V B2-B6: V_R = 1000V	I_{R1} I_{R2}	—	—	1.0	**mA**
Reverse Leakage Current (T_A = 100ºC, 300 – 500 µsec Pulse)	B1: V_R = 2500V B2-B6: V_R = 1000V	I_{R3} I_{R4}	—	—	50	**mA**
Breakdown Voltage (I_R = 100 µA)	B1 B2-B6	B_{VR1} B_{VR2}	3,300 1,200	— —	— —	**Volts**
Insulation Resistance (All Terminals to Base @ 15,000 Volts)		R_{INSUL1}	10	—	—	**GW**
Reverse Recovery Time (I_F = 0.5 A, I_R = 1.0 A, I_{RR} = 0.25 A)		t_{RR}	—	—	60	**nsec**
Capacitance (Per Diode)	B1: V_R = 100 V B2-B6: V_R = 10 V	C_{T1} C_{T2}	— —	— —	13 25	**pF**

NOTE:

1/ All Electrical Characteristics Are for Bridge Leg @ T_A = 25ºC (Unless Otherwise Specified)

PACKAGE OUTLINE: ASPM



Tolerances (Unless Specified)

.XX ± .03 .XXX ± .010