



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

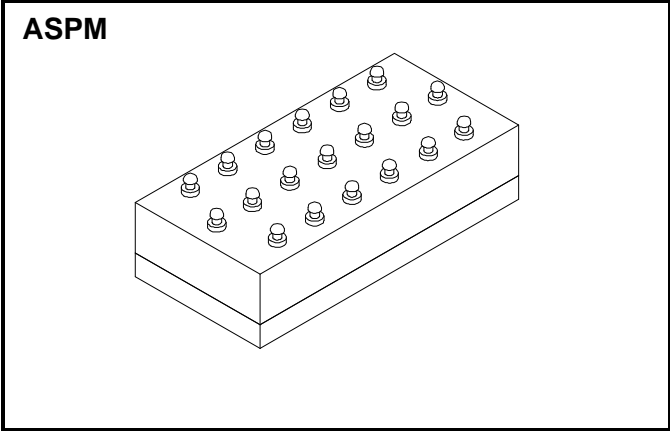
SPX2091

1 AMP 9,300 VOLTS HIGH VOLTAGE RECTIFIER BRIDGE STACK

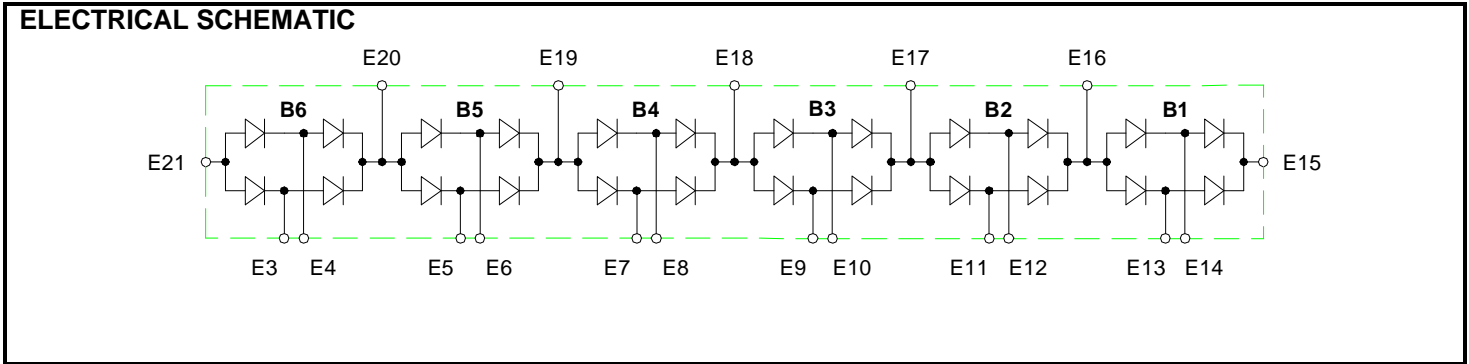
Designer's Data Sheet

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.



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





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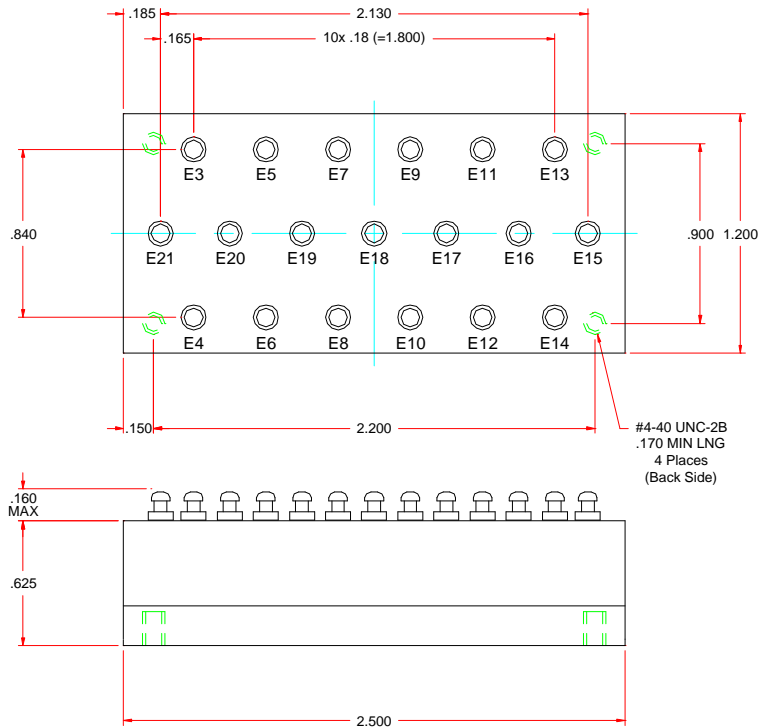
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ELECTRICAL CHARACTERISTICS ^{1/}		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 1.0 \text{ A}$, 300 – 500 μsec Pulse)	B1	V_{F1}	—	—	7.5	Volts
	B2-B6	V_{F2}	—	—	2.5	
Instantaneous Forward Voltage Drop ($I_F = 0.35 \text{ A}$, $T_A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

NOTE:

^{1/} All Electrical Characteristics Are for Bridge Leg @ $T_A = 25^\circ\text{C}$ (Unless Otherwise Specified)

PACKAGE OUTLINE: ASPM



Tolerances (Unless Specified)
 .XX ± .03 .XXX ± .010