



Solid State Devices, Inc.

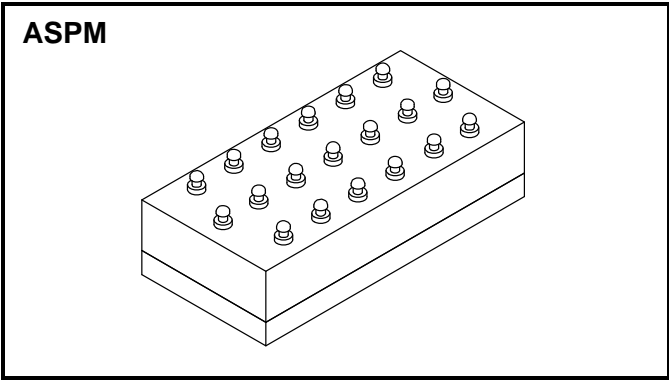
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SPX2091

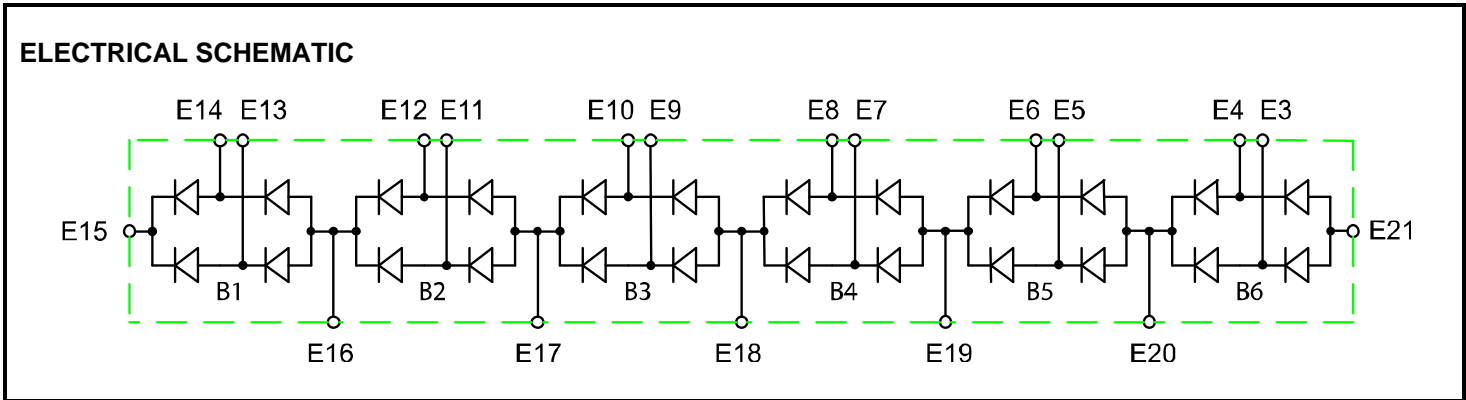
**1 AMP
 9,300 VOLTS
 HIGH VOLTAGE
 RECTIFIER BRIDGE STACK**

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, $T_A = 25^\circ\text{C}$)		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)		$R_{\theta JB}$	2.5	°C/W





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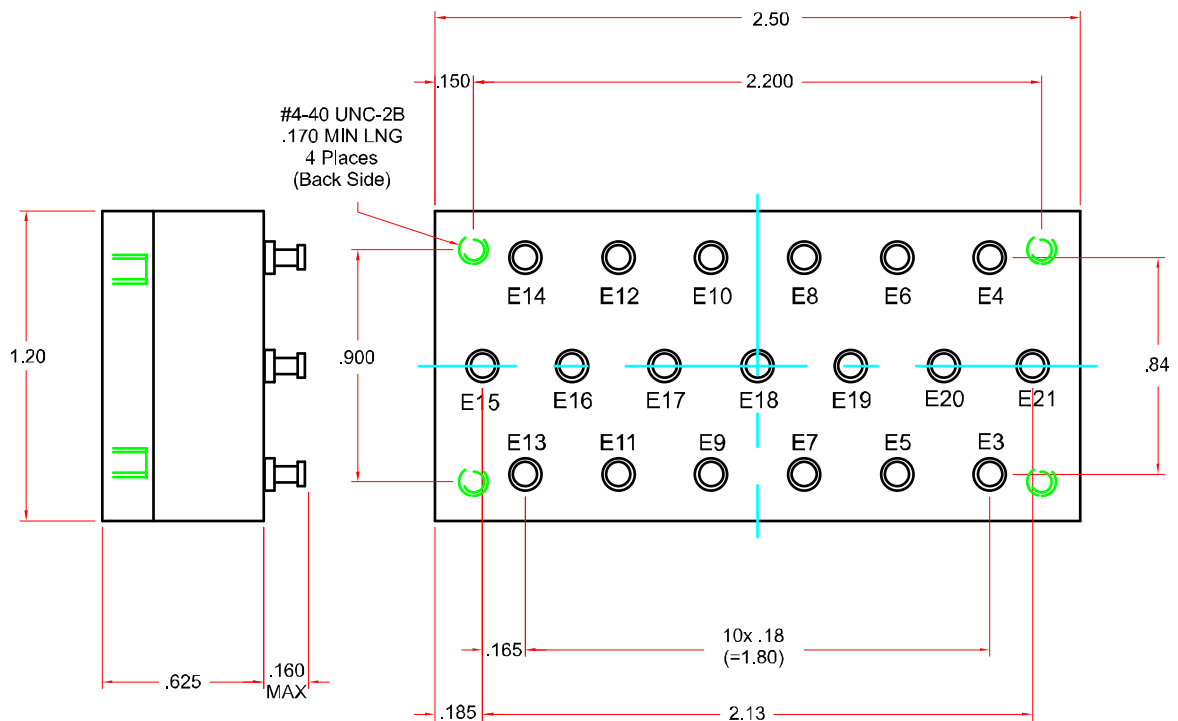
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ELECTRICAL CHARACTERISTICS ^{1/}		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (I _F = 1.0 A, 300 – 500 μsec Pulse)	B1	V _{F1}	—	—	7.5	Volts
	B2-B6	V _{F2}	—	—	2.5	Volts
Instantaneous Forward Voltage Drop (I _F = 0.35 A, T _A = 100°C, 300 – 500 μsec Pulse)	B2-B6	V _{F3}	—	—	1.3	Volts
Reverse Leakage Current (T _A = 25°C, 300 – 500 μsec Pulse)	B1: V _R = 2500V	I _{R1}	—	—	1.0	μA
	B2-B6: V _R = 1000V	I _{R2}	—	—	—	—
Reverse Leakage Current (T _A = 100°C, 300 – 500 μsec Pulse)	B1: V _R = 2500V	I _{R3}	—	—	50	μA
	B2-B6: V _R = 1000V	I _{R4}	—	—	—	—
Breakdown Voltage (I _R = 100 μA)	B1	B _{VR1}	3,300	—	—	Volts
	B2-B6	B _{VR2}	1,200	—	—	Volts
Insulation Resistance (All Terminals to Base @ 15,000 Volts)		R _{INSUL1}	10	—	—	GΩ
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	C _{T1}	—	—	13	pF
	B2-B6: V _R = 10 V	C _{T2}	—	—	25	pF

NOTE: ^{1/} All Electrical Characteristics Are for Bridge Leg @ T_A = 25°C (Unless Otherwise Specified)

PACKAGE OUTLINE: ASPM



Tolerances (Unless Otherwise Specified)

.XX ± .03" .XXX ± .010"

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

DATA SHEET #: PM0023E

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