



Solid State Devices, Inc.

14701 Firestone Blvd. * La Mirada, CA 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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Designer's Data Sheet

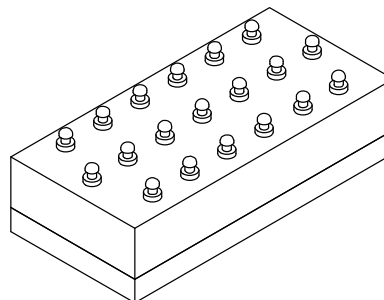
FEATURES:

- 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.

SPX2091

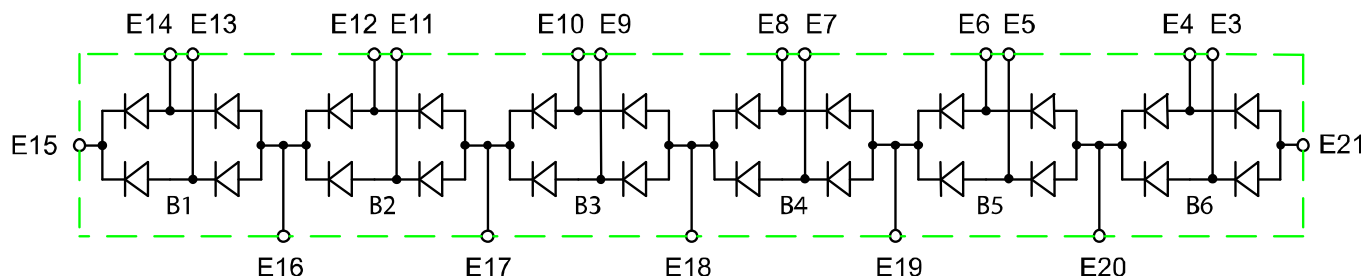
**1 AMP
9,300 VOLTS
HIGH VOLTAGE
RECTIFIER BRIDGE STACK**

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, $T_A = 25^\circ\text{C}$)		I_{FSM}	25	Amps
Operating Temperature Range		T_{OP}	-65 to +150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-65 to +150	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Base)		$R_{\theta JB}$	2.5	$^\circ\text{C/W}$

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 #: PM0023E

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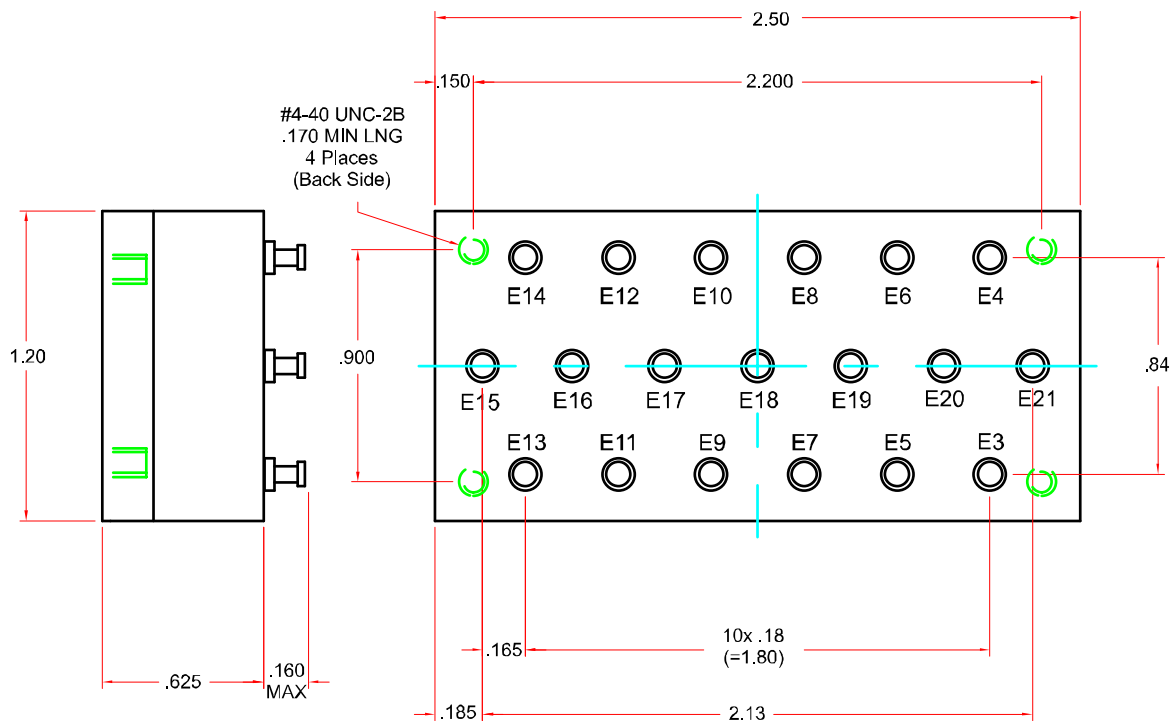
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ELECTRICAL CHARACTERISTICS ^{1/}		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 1.0$ A, 300 – 500 μ sec Pulse)	B1	V_{F1}	—	—	7.5	Volts
	B2-B6	V_{F2}	—	—	2.5	Volts
Instantaneous Forward Voltage Drop ($I_F = 0.35$ A, $T_A = 100^\circ\text{C}$, 300 – 500 μ sec Pulse)	B2-B6	V_{F3}	—	—	1.3	Volts
Reverse Leakage Current ($T_A = 25^\circ\text{C}$, 300 – 500 μ sec Pulse)	B1: $V_R = 2500$ V	I_{R1}	—	—	1.0	μ A
	B2-B6: $V_R = 1000$ V	I_{R2}	—	—	—	—
Reverse Leakage Current ($T_A = 100^\circ\text{C}$, 300 – 500 μ sec Pulse)	B1: $V_R = 2500$ V	I_{R3}	—	—	50	μ A
	B2-B6: $V_R = 1000$ V	I_{R4}	—	—	—	—
Breakdown Voltage ($I_R = 100$ μ A)	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	—	—	G Ω
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 @ $T_A = 25^\circ\text{C}$ (Unless Otherwise Specified)

PACKAGE OUTLINE: ASPM



Tolerances (Unless Otherwise Specified)

.XX $\pm$.03"

.XXX $\pm$.010"

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