



Solid State Devices, Inc.

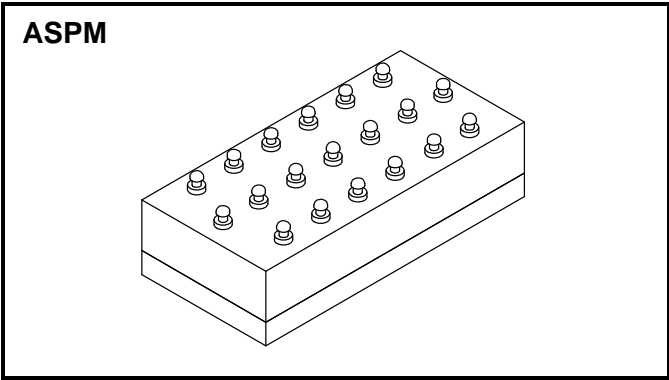
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SPX2090

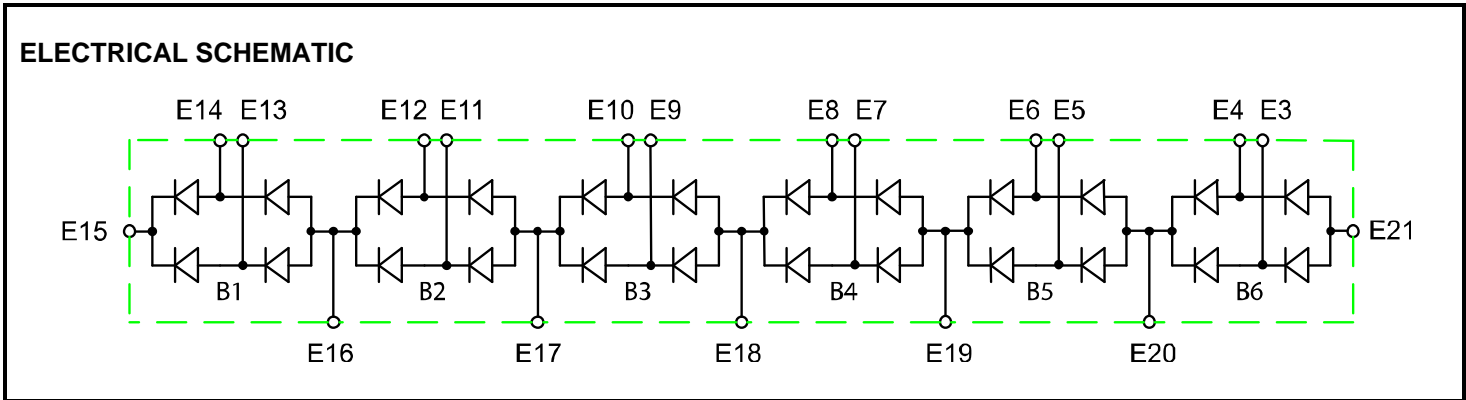
**1 AMP
 15,000 VOLTS
 HIGH VOLTAGE
 RECTIFIER BRIDGE STACK**

Designer's Data Sheet

- 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	Symbol	Value	Units
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, $T_A = 25^\circ\text{C}$)	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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ELECTRICAL CHARACTERISTICS ^{1/}	Symbol	Min	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 1.0$ A, 300 μ sec Pulse minimum)	V_{F1}	—	7.5	Volts
Reverse Leakage ($V_R = 2500$ V, 300 μ sec Pulse minimum)	I_{R1} I_{R2}	— —	1.0 50	μ A
Reverse Leakage Current ($T_A = 100^\circ$ C, 300 – 500 μ sec Pulse)	I_{R3} I_{R4}	— —	50 50	μ A
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

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

