SPX2090

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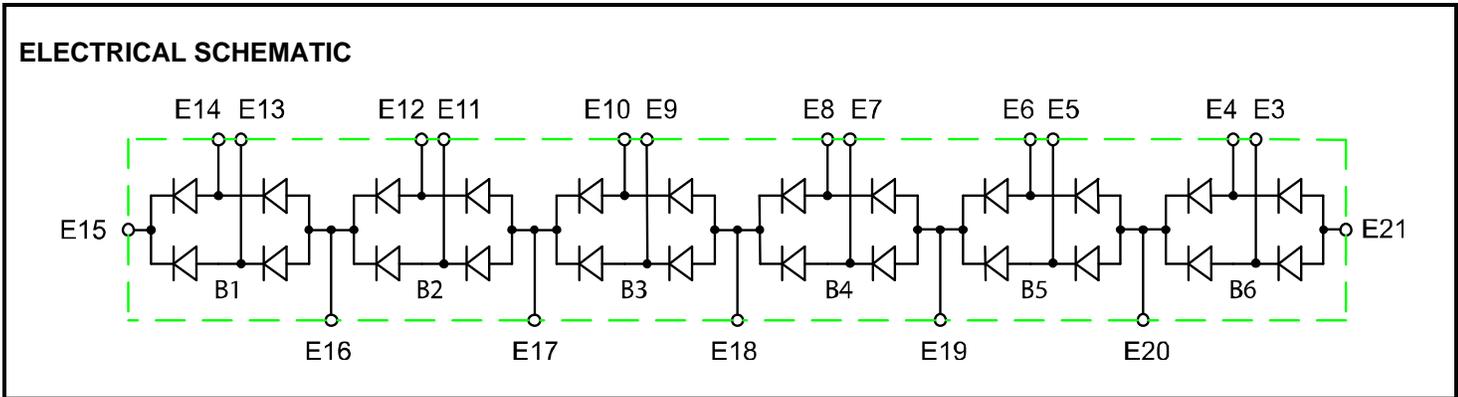HIGH VOLTAGE
RECTIFIER BRIDGE STACK**

Designer's Data Sheet

ASPM

FEATURES:

- Aerospace High Voltage Power Supply Applications
- High Blocking Voltage – 15kV Minimum
- Low Mechanical Stress Design
- Excellent Thermal Management – 2.5 ^{o}C/W
- TX, TXV, and Space Level Screening Available.
- Consult Factory for:
  - o Higher Blocking Voltages
  - o Faster Switching Speeds
  - o Other Electrical Configurations
  - o Available with a sandblasted case to promote adhesion, add "SAB" suffix.
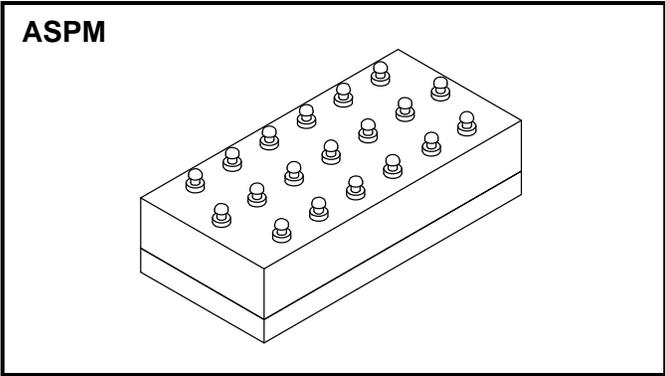
MAXIMUM RATINGS	Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage (Each Bridge)	V_R	3,300	**Volts**
Average Rectified Forward Current (Non-Repetitive, t = 8.3 ms Pulse)	I_O	1	**Amps**
Peak Surge Current (Non-Repetitive, t = 8.3 ms Pulse, T_A = 25°C)	I_{FSM}	25	**Amps**
Operating Temperature Range	T_{OP}	-65 to +150	**^{o}C**
Storage Temperature Range	T_{stg}	-65 to +150	**^{o}C**
Maximum Thermal Resistance (Junction to Base)	$R_{\theta JB}$	2.5	**^{o}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.

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ELECTRICAL CHARACTERISTICS [1]		Symbol	Min	Max	Units
Instantaneous Forward Voltage Drop (I_F = 1.0 A, 300 μsec Pulse minimum)		V_{F1}	—	7.5	**Volts**
Reverse Leakage (V_R = 2500V, 300 μsec Pulse minimum)	T_A = 25ºC T_A = 100ºC	I_{R1} I_{R2}	— —	1.0 50	μA
Reverse Leakage Current (T_A = 100ºC, 300 – 500 μsec Pulse)	B1: V_R = 2500V B2-B6: V_R = 1000V	I_{R3} I_{R4}	—	50	μA
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**

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

PACKAGE OUTLINE: ASPM

#4-40 UNC-2B
.170 MIN LNG
4 Places
(Back Side)

2.50
.150
2.200
1.20
.900
.84

E14 E12 E10 E8 E6 E4
E15 E16 E17 E18 E19 E20 E21
E13 E11 E9 E7 E5 E3

.165
10x .18
(=1.80)
.185
2.13

.625
.160
MAX

Tolerances (Unless Otherwise Specified)
.XX $\pm$ .03"   .XXX $\pm$ .010"

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