



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SPX2094 Series

**30 nsec
 15,000 VOLTS
 HIGH VOLTAGE
 RECTIFIER BRIDGE STACK**

- FEATURES:**
- Aerospace High Voltage Power Supply Applications
 - Low Mechanical Stress Design
 - Excellent Thermal Management- 2.5DC/W
 - TX, TXV, and Space Level Screening Available
- Consult Factory For:
- Higher Blocking Voltages
 - Faster Switching Time
 - Other Electrical Configurations

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPX2094-

Finish
 — = Standard Case
 SAB = Sand Blasted Case

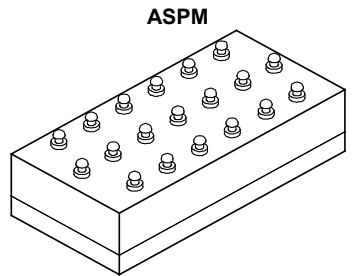
Screening ^{2/}
 — = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level

Dash Number ^{3/}

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage (Module)	$V_{R(MODULE)}^{3/}$	15,000	V
Peak Repetitive Reverse and DC Blocking Voltage (Each Bridge)	V_R	2700	Volts
Average Rectified Forward Current (Non-Repetitive, t = 8.3 msec Pulse)	I_O	1	Amps
Peak Surge Current (Non-Repetitive, t = 8.3 msec Pulse, TA = 25°C)	I_{FSM}	25	Amps
Storage & Operating Temperature Range	$T_{OP} \& T_{STG}$	-65 to +150	°C
Thermal Resistance, Junction to Base	θ_{JB}	2.5	°C/W

- Notes:**
- ^{1/} For ordering information, price, and availability- Contact Factory.
^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.
^{3/} For each dash number, refer to $V_{R(MODULE)}$ rating, schematic, and outline.





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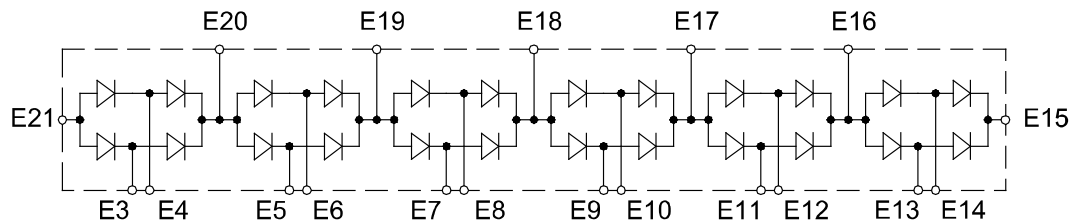
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ELECTRICAL CHARACTERISTICS, Each Bridge Leg, @ TA = 25°C (Unless Otherwise Specified)

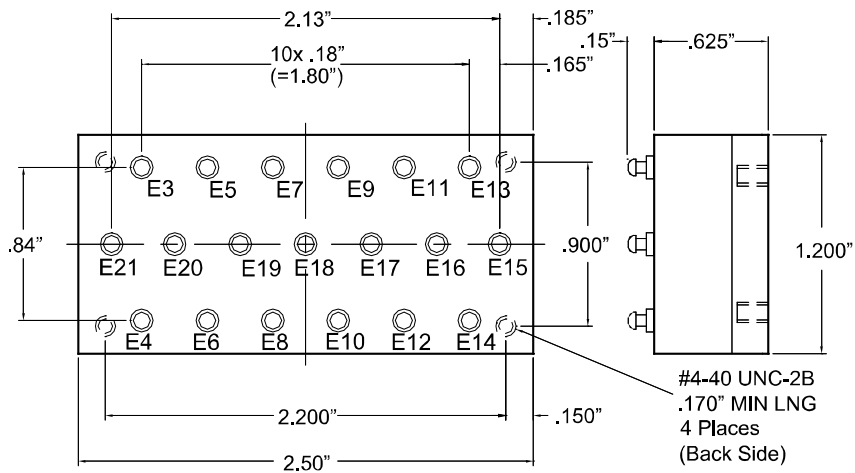
PARAMETER	SYMBOL	MIN	MAX	UNIT
Instantaneous Forward Voltage Drop ($I_F = 1.0A$, 300 μ sec Pulse Minimum)	V_{F1}	---	5.7	Volts
Reverse Leakage ($V_R = 2,500V$, 300 μ sec Pulse Minimum)	$T_A = 25^\circ C$ I_{R1}	---	10	μ Amps
	$T_A = 100^\circ C$ I_{R2}	---	200	
Insulation Resistance (All Terminals to Base @ 15,000V)	R_{INSUL1}	10	---	G Ω
Reverse Recovery Time ($I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$)	t_{rr}	--	30	nsec

SPX2094 Schematic



SPX2094 Outline

Tolerances
(Unless Specified):
 .XX \pm .03
 .XXX \pm .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 #: PM0031A

DOC