



## 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

#### Part Number / Ordering Information <sup>1/</sup>

SPA498-02



#### Screening <sup>2/</sup>

— = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

# SPA498-02

**1 AMP  
HIGH VOLTAGE  
RECTIFIER BRIDGE STACK  
6000 Volts**

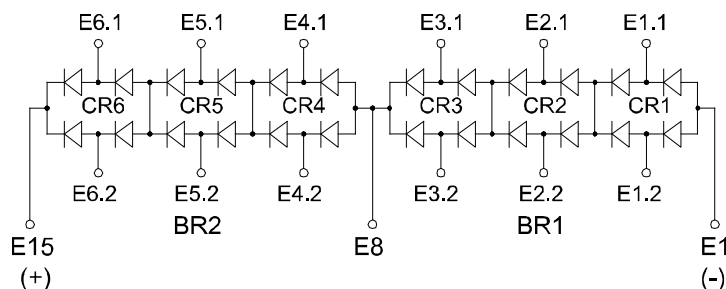
#### Features:

- Aerospace high voltage power supply applications
- High blocking voltage – 6 kV minimum
- Low mechanical stress design
- TX, TXV, and Space level screening available
- Consult factory for:
  - Higher blocking voltages
  - Faster switching speeds
  - Other electrical configurations

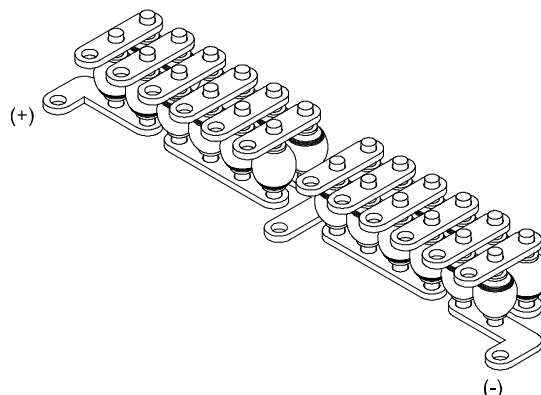
### MAXIMUM RATINGS

CHARACTERISTIC		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	Bridge BR1 Bridge BR2	$V_R$	3000 3000	V
Average Rectified Forward Current (Non-repetitive, $t = 8.3$ ms Pulse)		$I_o$	1	A
Peak Surge Current (Non-repetitive, $t = 8.3$ ms Pulse, $T_A = 25^\circ\text{C}$ )		$I_{FSM}$	25	A
Operating and Storage Temperature		$T_{op}$ & $T_{stg}$	-65 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Tab		$R_{\theta JT}$	2.5	$^\circ\text{C/W}$

### ELECTRICAL SCHEMATIC



### ASPM



#### Notes:

<sup>1/</sup> For ordering information, price, operating curves, and availability, contact factory.

<sup>2/</sup> Screening based on MIL-PRF-19500. Screening flows available on request.

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

**DATA SHEET #: PM0026C**

**DOCX**



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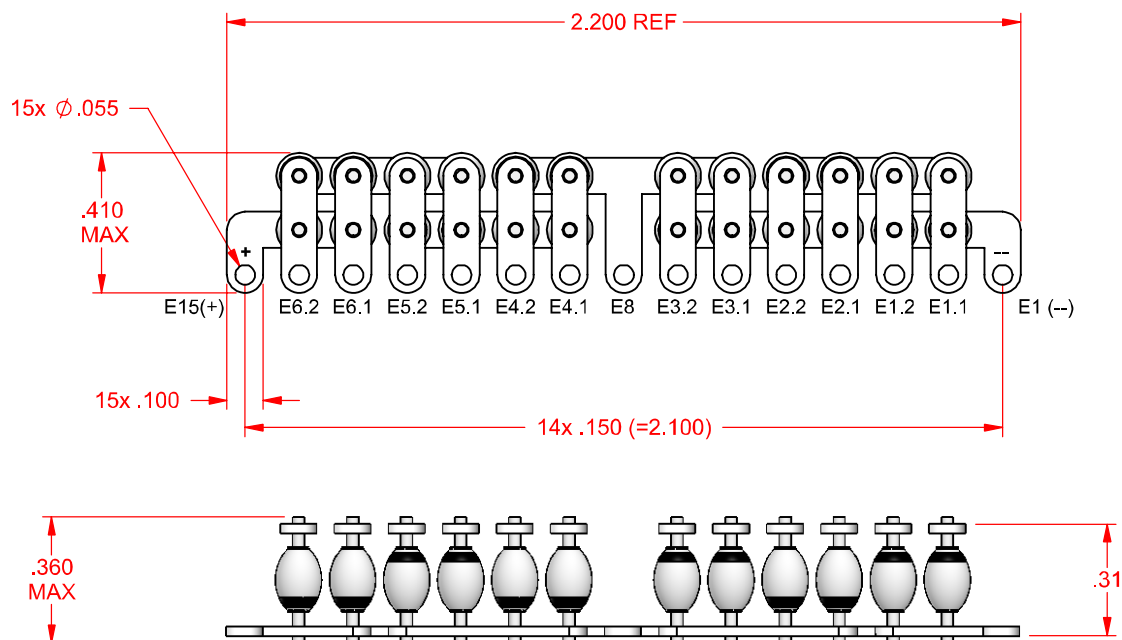
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**ELECTRICAL CHARACTERISTICS, @  $T_A = 25^\circ\text{C}$  (unless otherwise specified)**

PARAMETER, per each Bridge (CR1-CR6) Leg	SYMBOL	MIN	TYP	MAX	UNIT
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 1.0\text{ A}$ , 300 – 500 $\mu\text{sec}$ pulse)	$V_{F1}$	-	-	1.9	V
<b>Reverse Leakage</b> ( $V_R = 1000\text{V}$ , 300 $\mu\text{sec}$ pulse minimum) $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	$I_{R1}$	-	-	5.0	$\mu\text{A}$
	$I_{R2}$	-	-	500	$\mu\text{A}$
<b>Reverse Recovery Time</b> ( $I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ , $I_{RR} = 0.25\text{ A}$ )	$t_{RR}$	-	70	-	nsec

**CASE OUTLINES: ASPM**



Tolerances (unless specified):

.XX $\pm$ .03

.XXX $\pm$ .010

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