

## SOLID STATE DEVICES, INC.

14005 Stage Road \* Santa Fe Springs, Ca 90670 Phone: (562) 404-4474 \* Fax: (562) 404-1773

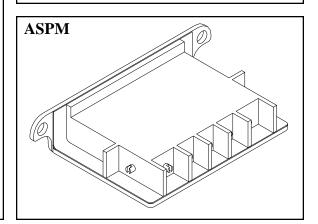
### **DESIGNER'S DATA SHEET**

#### **FEATURES:**

- Aerospace High Voltage Power Supply Applications.
- High Blocking Voltage 18kV 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.

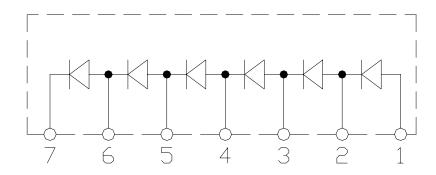
## **SDA475-02**

## 3 AMP/18,000 VOLTS HIGH VOLTAGE MULTIPLIER RECTIFIER STACK



MAXIMUM RATINGS			
CHARACTERISTIC	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage (each rectifier)	$egin{array}{c} V_{RM} \ V_{RWM} \ V_{R} \end{array}$	6,000	Volts
Average Rectified Forward Current (Non-repetitive, t = 8.3 ms Pulse)	I <sub>O</sub>	3	Amps
Peak Surge Current (Non-repetitive, t = 8.3 ms Pulse, T <sub>A</sub> = 25°C)	$I_{\mathrm{FSM}}$	25	Amps
Operating Temperature Range	T <sub>OP</sub> -65 TO +15		°C
Storage Temperature Range	T <sub>STG</sub>	-65 TO +150	°C
Thermal Resistance, Junction to Base	$\Theta_{ m JB}$	2.5	°C/W

#### **ELECTRICAL SCHEMATIC**



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ELECTRICAL CHARACTERISTICS, Each Rectifier, @ T <sub>A</sub> =25°C (Unless Otherwise Specified)						
PARAMETER	SYMBOL	MIN	MAX	UNIT		
Instantaneous Forward Voltage Drop $(I_F = 0.6A)$	$ m V_{F1}$	-	10	Volts		
<b>Reverse Leakage</b> $(V_R = 6,000V, T_A = 25^{\circ}C)$ $(V_R = 6,000V, T_A = 100^{\circ}C)$	I <sub>R1</sub> I <sub>R2</sub>	-	2.0 200	µAmps		
Insulation Resistance (All terminals to Base @15,000V)	R <sub>INSUL1</sub>	10	-	GΩ		
Reverse Recovery Time $(I_F=0.5A,I_R=1.0A,I_{RR}=0.25)$	t <sub>RR</sub>	-	70	nsec		

