



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
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**SDA168H thru SDA168N**

**HIGH RELIABILITY  
 5.0 AMP, 1000 – 5000 VOLTS  
 STANDARD RECOVERY  
 THREE PHASE BRIDGE RECTIFIER**

**Designer's Data Sheet**

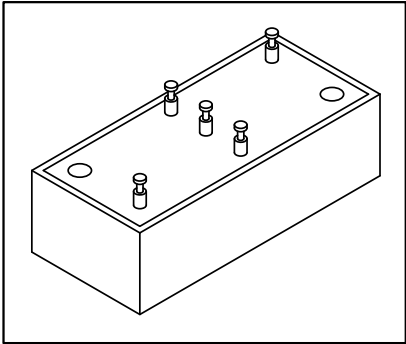
**Part Number/Ordering Information <sup>1/</sup>**  
**SDA168** — —  
 L **Screening <sup>2/</sup>**  
 — = Not Screened  
 TX = TX Level  
 TXV = TXV  
 S = S Level  
**Peak Inverse Voltage**  
 H = 1,000 V, I = 1,500 V, J = 2,000 V,  
 K = 2,500 V, L = 3,000 V, M = 4,000 V,  
 N = 5,000 V

- FEATURES:**
- Average Output Current 5.0 Amps @ 55°C
  - PIV 1000 to 5000 Volts Per Leg
  - Hermetically Sealed Diode Cells
  - Avalanche Rated
  - Encapsulated Epoxy Case
  - Insulated Electrical Connections
  - Small Size
  - Mounting Holes for Ease of Installation
  - Available in Fast, Ultra Fast, and Hyper Fast Recovery Times
  - TX, TXV, or S-Level Screening Available

**ELECTRICAL CHARACTERISTICS <sup>3/</sup>**

| Part Number           | Peak Inverse Voltage (per leg) | Sine Wave RMS Input Voltage Max. | Reverse <sup>4/</sup> Recovery Time | Average DC Output Current<br>T <sub>C</sub> =Case Temp |                    |                    | Average DC Output Current<br>T <sub>A</sub> = Ambient Temp (no heat sink) |                    |                | Peak Forward Surge Current (1 Cycle) | Peak Repetitive Forward Current | Maximum Forward Voltage (per leg) @ 3 ADC | Maximum Reverse Current (per leg) @ PIV |       |
|-----------------------|--------------------------------|----------------------------------|-------------------------------------|--|--------------------|--------------------|---|--------------------|----------------|--------------------------------------|---------------------------------|---|---|-------|
|                       |                                |                                  |                                     | I <sub>F(AV)</sub>                                     | I <sub>F(AV)</sub> | I <sub>F(AV)</sub> | I <sub>F(AV)</sub>  | I <sub>F(AV)</sub> | I <sub>R</sub> |                                      |                                 |   | I <sub>R</sub>                          |       |
| Symbol                | PIV                            | V <sub>r</sub>                   | T <sub>rr</sub>                     | I <sub>F(AV)</sub>                                     |                    |                    | I <sub>F(AV)</sub>  |                    |                | I <sub>FSM</sub>                     | I <sub>FRM</sub>                | V <sub>F</sub>                            | I <sub>R</sub>                          |       |
| Units                 | Volts                          | Volts                            | µs                                  | Amps   |                    |                    | Amps  |                    |                | Amps                                 | Amps                            | Volts                                     | µA                                      |       |
| Conditions            |                                |                                  | Max                                 | 55°C   | 100°C              | 125°C              | 25°C  | 55°C               | 100°C          |                                      |                                 |   | 25°C                                    | 100°C |
| SDA168H               | 1000                           | 707                              | 5                                   | 5.0  | 3.5                | 2.0                | 3.0   | 2.0                | 1.5            | 150                                  | 75                              | 1.1                                       | 5                                       | 50    |
| SDA168I               | 1500                           | 1060                             | 5                                   | 5.0  | 3.5                | 2.0                | 3.0   | 2.0                | 1.5            | 150                                  | 75                              | 2.2                                       | 5                                       | 50    |
| SDA168J               | 2000                           | 1414                             | 5                                   | 5.0  | 3.5                | 2.0                | 3.0   | 2.0                | 1.5            | 150                                  | 75                              | 2.2                                       | 5                                       | 50    |
| SDA168K               | 2500                           | 1767                             | 5                                   | 5.0  | 3.5                | 2.0                | 3.0   | 2.0                | 1.5            | 150                                  | 75                              | 3.3                                       | 5                                       | 50    |
| SDA168L               | 3000                           | 2121                             | 5                                   | 5.0  | 3.5                | 2.0                | 3.0   | 2.0                | 1.5            | 150                                  | 75                              | 3.3                                       | 5                                       | 50    |
| SDA168M <sup>5/</sup> | 4000                           | 2828                             | 5                                   | 5.0  | 3.5                | 2.0                | 3.0   | 2.0                | 1.5            | 150                                  | 75                              | 4.4                                       | 5                                       | 50    |
| SDA168N <sup>5/</sup> | 5000                           | 3535                             | 5                                   | 5.0  | 3.5                | 2.0                | 3.0   | 2.0                | 1.5            | 150                                  | 75                              | 5.5                                       | 5                                       | 50    |

SDA168 Package:



- NOTES:**
- <sup>1/</sup> For Ordering Information, Price, and Availability- Contact Factory.
  - <sup>2/</sup> Screened to MIL-PRF-19500.
  - <sup>3/</sup> Unless Otherwise Specified, All Electrical Characteristics @25°C.
  - <sup>4/</sup> Recovery Conditions: I<sub>F</sub> = 0.5 Amp, I<sub>R</sub> = 1.0 Amp rec. to .25 Amp.
  - <sup>5/</sup> Please consult factory for further details on these items.

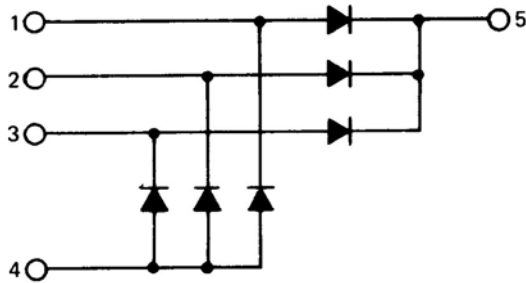


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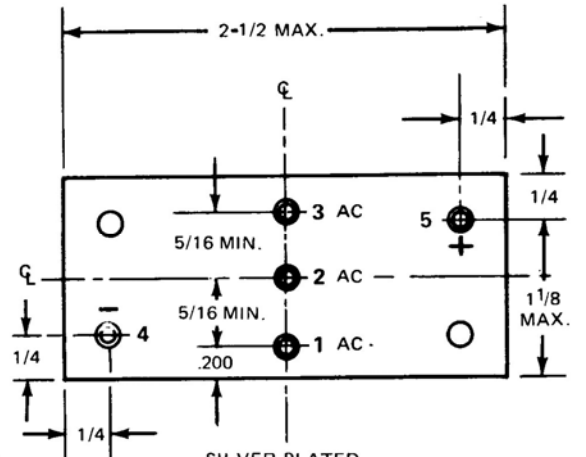
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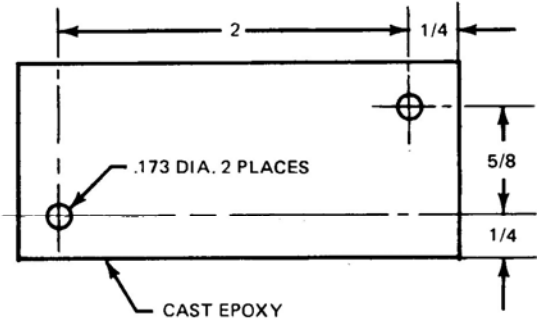
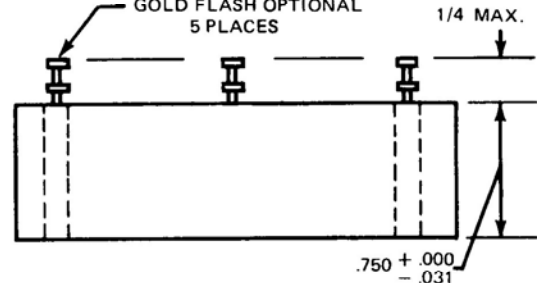
**SDA168H through SDA168N\*:**



**SCHEMATIC DIAGRAM**

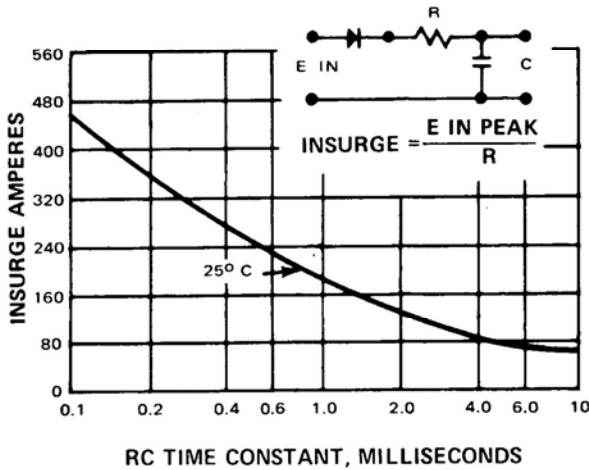


SILVER PLATED  
 BRASS TERMINAL  
 GOLD FLASH OPTIONAL  
 5 PLACES



TOLERANCE XX<sup>±</sup> .03  
 XXX<sup>±</sup> .020  
 FRACTIONAL = NOMINAL DIMENSION

**MAXIMUM RATINGS FOR CAPACITY LOADS**



\*For information on curves, contact the Factory Representative for Engineering Assistance.

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

**DATA SHEET #: RA0031A**

**DOC**