

**Solid State Devices, Inc.**

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**SDA116 Series**

**25A / 1000V  
THREE PHASE BRIDGE  
RECTIFIER ASSEMBLY  
ULTRA FAST – 70 ns**

**DESIGNER'S DATA SHEET**

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

**SDA116**

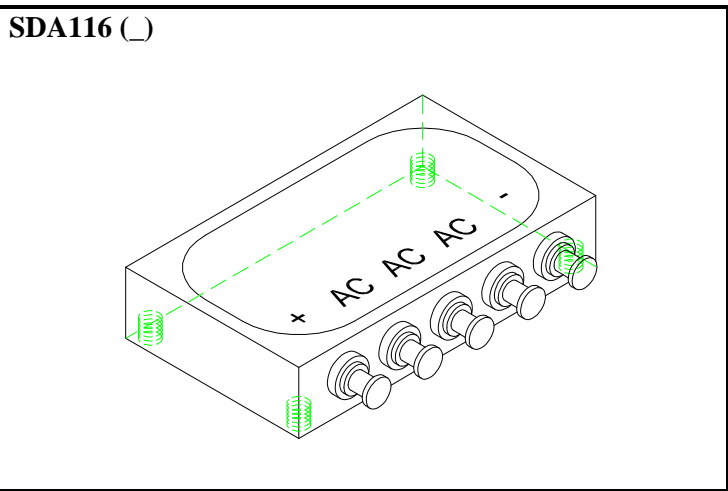
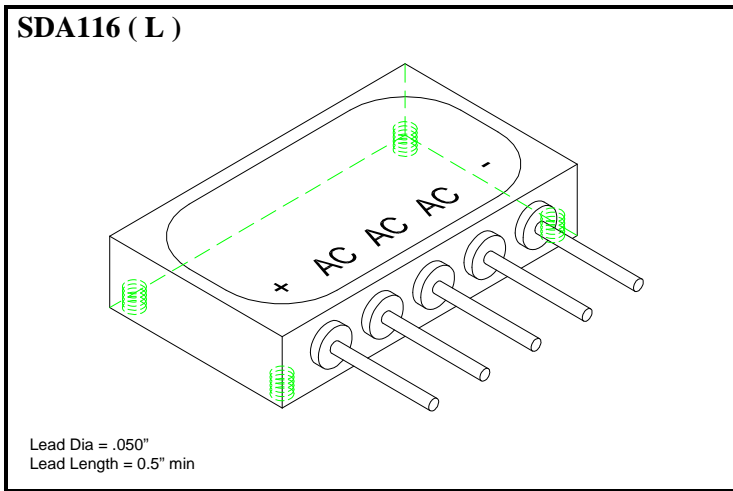
— — — + **Lead Bend**<sup>3/</sup> — = Straight Leads  
 UB = Up Bend  
 DB = Down Bend

+ **Terminals**<sup>2/3/</sup> L = Copper Leads  
 — = Turret Terminals

+ **Voltage** J = 600 V  
 K = 800 V  
 M = 1000 V

- Features:**
- Higher Blocking Voltage Available. Contact Factory.
  - Average Output Current 25 Amps
  - Low Reverse Leakage Current
  - Constructed with Void-free, Hermetically Sealed Discretes
  - Aluminum Case for Maximum Thermal Conductivity
  - Small Package Size (1.500 x 0.875 x 0.310")
  - TX and TXV & S Level Screening Available
  - Standard, Fast, & Hyper Fast Versions Available. Contact Factory.

| Maximum Ratings   |                               | Symbol                          | Value              | Units         |
|---|-------------------------------|---------------------------------|--------------------|---------------|
| <b>Peak Repetitive and Peak Surge Reverse Voltage</b>                                       | SDA116J<br>SDA116K<br>SDA116M | $V_{RRM}$<br>$V_{RSM}$<br>$V_R$ | 600<br>800<br>1000 | Volts         |
| <b>Average Rectified Forward Current</b> <sup>4/</sup><br>(Resistive Load, 60 Hz Sine Wave) | $T_C = 55^{\circ}C$           | $I_o$                           | 25                 | Amps          |
| <b>Peak Surge Current</b><br>(8.3 ms Pulse, Half Sine Wave, $T_A = 25^{\circ}C$ , per leg)  |                               | $I_{FSM}$                       | 125                | Amps          |
| <b>Operating &amp; Storage Temperature</b>  |                               | $T_{op}$ & $T_{stg}$            | -55 to +150        | $^{\circ}C$   |
| <b>Maximum Thermal Resistance, Junction to Case</b>   |                               | $R_{qJC}$                       | 2.5                | $^{\circ}C/W$ |



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

**SDA116 Series**

| Electrical Characteristic <sup>5/</sup>   | Symbol  | Min | Typ | Max                  | Units        |
|---|---|-----|-----|----------------------|--------------|
| <b>Instantaneous Forward Voltage Drop</b><br>(T <sub>A</sub> = 25°C, pulsed)<br>(T <sub>A</sub> = 25°C, pulsed)<br>(T <sub>A</sub> = -55°C, pulsed) | I <sub>F</sub> = 3A<br>I <sub>F</sub> = 9A<br>I <sub>F</sub> = 9A | —   | —   | 1.40<br>1.75<br>1.95 | <b>Volts</b> |
| <b>Reverse Leakage Current</b><br>(Rated V <sub>R</sub> , T <sub>A</sub> = 25°C, pulsed)  | <b>I<sub>R1</sub></b>   | —   | —   | 25                   | <b>mA</b>    |
| <b>Reverse Leakage Current</b><br>(Rated V <sub>R</sub> , T <sub>A</sub> = 100°C, pulsed)   | <b>I<sub>R2</sub></b>   | —   | —   | 500                  | <b>mA</b>    |
| <b>Reverse Recovery Time</b><br>(I <sub>F</sub> = 500 mA, I <sub>R</sub> = 1 A, I <sub>RR</sub> = 250 mA T <sub>A</sub> = 25°C)                     | <b>t<sub>rr</sub></b>   | —   | —   | 70                   | <b>ns</b>    |

**NOTES:**

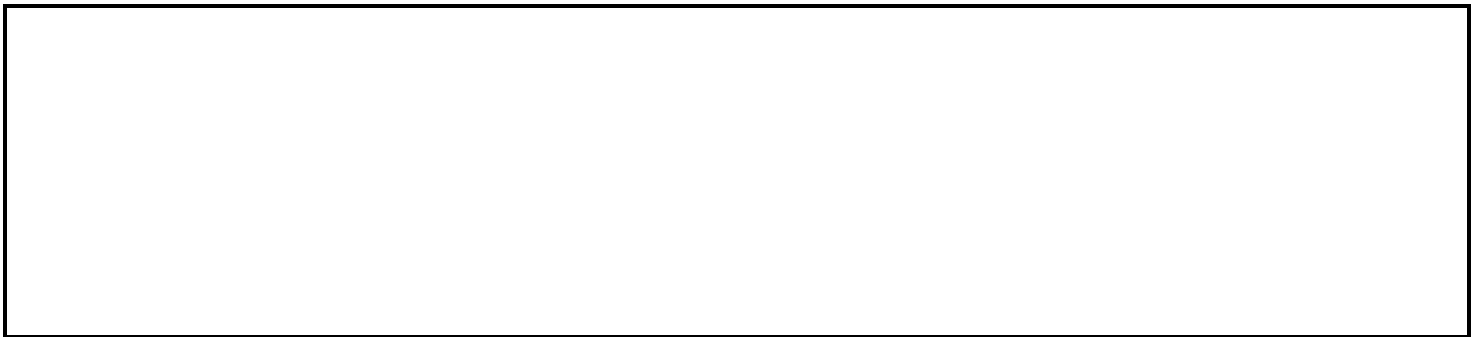
1/ For Ordering Information, Price, and Availability Contact Factory.

2/ For Package Outlines Contact Factory.

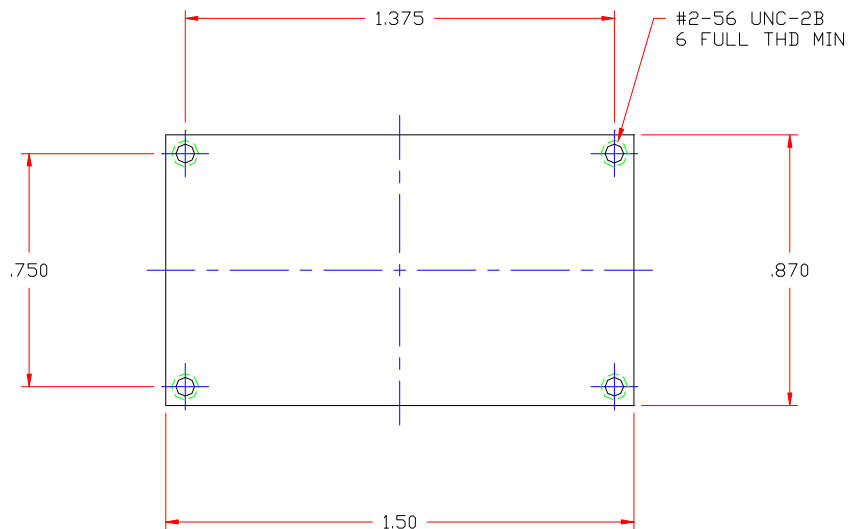
3/ Up and Down Bend Configurations are Available for ‘—’ ( Leaded ) Packages Only.

4/ Derate Linearly at 0.26 A/°C for T<sub>C</sub> > 55°C.

5/ Unless Otherwise Specified, All Electrical Characteristics @25°C.



**Mounting Diagram: <sup>2/</sup>**



Thickness = 0.340" min