



**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

**SDA165AHF thru  
SDA165HHF**

**6-10 AMP  
50-800 VOLTS  
HYPER FAST  
SINGLE PHASE BRIDGE**

**DESIGNER'S DATA SHEET**

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

**SDA165 HF**

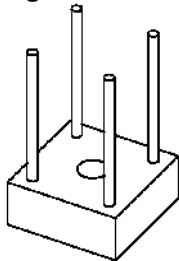
**Screening <sup>2/</sup>**  
 — = Not Screened  
 TX = TX Level  
 TXV = TXV Level  
 S = S Level

**Voltage**  
 A = 50 V      E = 300 V  
 B = 100 V     F = 400 V  
 C = 150 V     G = 6000 V  
 D = 200 V     H = 800 V

- Features:**
- Average Output Current 6-10 Amps @ 55°C
  - Surge Current of 50-125 Amps
  - PIV 50-800 Volts Per Leg
  - Operating & Storage Temp. Range -55°C to +150°C
  - Electrically Insulated from Case
  - Hermetically Sealed Void Free Rectifier Cells
  - Available in Hyper Fast Recovery

<b>Maximum Ratings <sup>3/ 4/</sup></b>		<b>Symbol</b>	<b>Value</b>	<b>Units</b>
<b>Peak Repetitive Reverse and DC Blocking Voltage</b>	SDA165A	$V_{RRM}$ $V_{RWM}$ $V_R$	50	<b>Volts</b>
	SDA165B		100	
	SDA165C		150	
	SDA165D		200	
	SDA165E		300	
	SDA165F		400	
	SDA165G		600	
	SDA165H		800	
<b>Average Rectified Forward Current</b> Resistive Load, 60 Hz Sine Wave, T <sub>C</sub> = 55°C	SDA165A – C	<b>I<sub>o</sub></b>	10	<b>Amps</b>
	SDA165D – H		6	
<b>Peak Surge Current</b> 8.3 ms Pulse, Half Sine Wave	SDA165A – C	<b>I<sub>FSM</sub></b>	125	<b>Amps</b>
	SDA165D – E		50	
	SDA165F – H		75	
<b>Operating &amp; Storage Temperature</b>		<b>T<sub>op</sub> &amp; T<sub>stg</sub></b>	-55 to +150	<b>°C</b>
<b>Maximum Thermal Resistance</b> Junction to Case (per Assembly)		<b>R<sub>θJC</sub></b>	5	<b>°C/W</b>

**SDA165 Package:**



<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.  
<sup>3/</sup> Unless otherwise specified, all electrical characteristics at 25°C.  
<sup>4/</sup> Unless otherwise specified, all electrical characteristics shall be per leg.

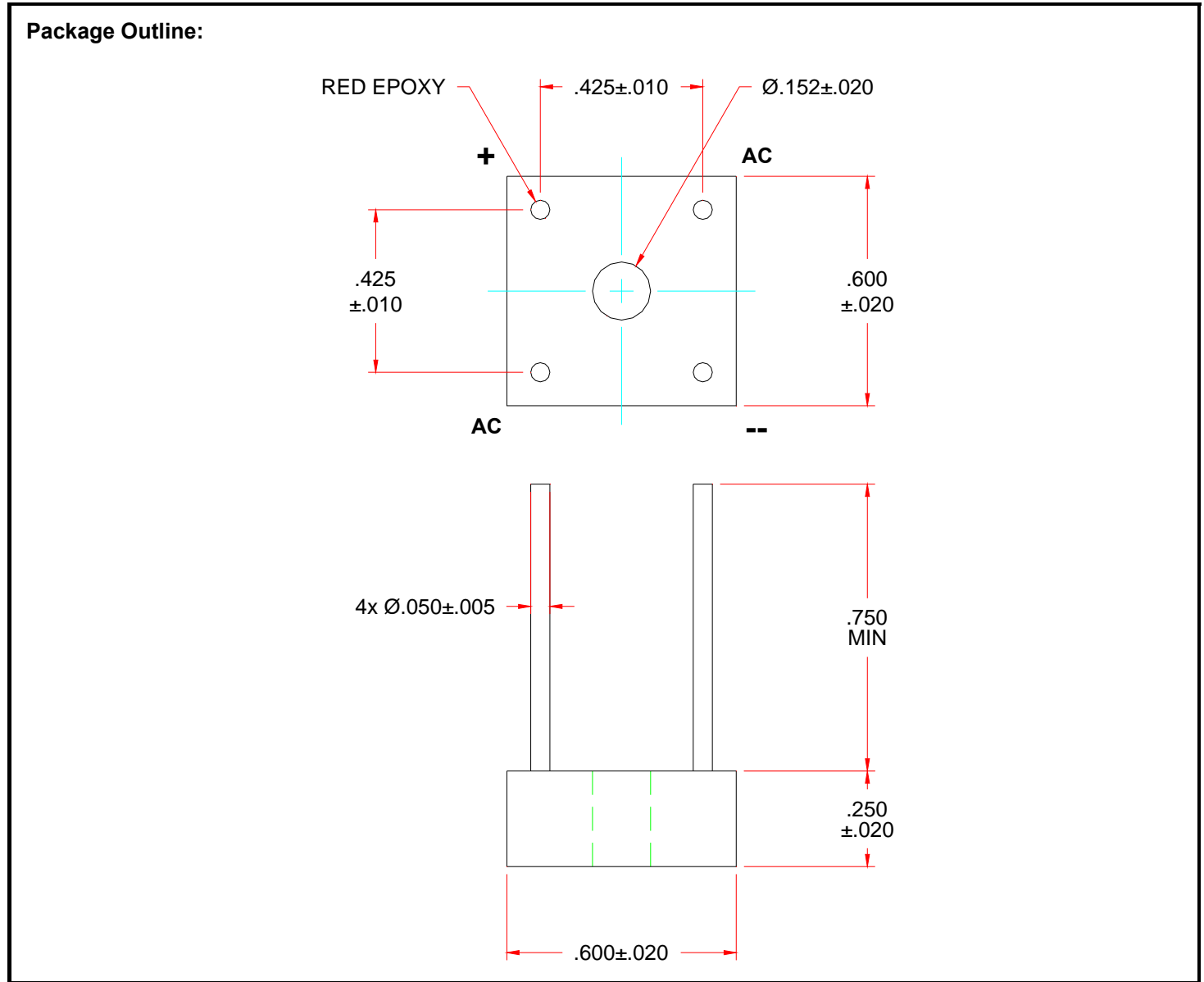


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**SDA165AHF thru  
SDA165HHF**

Electrical Characteristics <sup>3/ 4/</sup>		Symbol	Min	Max	Units
<b>Instantaneous Forward Voltage Drop</b> 300 μsec pulse	SDA165A – C; I <sub>F</sub> = 6 A	V <sub>F</sub>	–	0.95	V
	SDA165D – E; I <sub>F</sub> = 3 A			1.05	
	SDA165F – G; I <sub>F</sub> = 3 A			1.85	
	SDA165H; I <sub>F</sub> = 3 A			2.30	
<b>Reverse Leakage Current</b> V <sub>R</sub> = Rated, 300 μsec pulse minimum	SDA165A – C	I <sub>R1</sub>	–	5.0	μA
	SDA165D – H			10.0	
<b>Reverse Leakage Current</b> 300 μsec pulse minimum, T <sub>A</sub> = 100°C	SDA165A – C	I <sub>R2</sub>	–	200	μA
	SDA165D – E			1000	
	SDA165F – H			250	
<b>Reverse Recovery Time</b> I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1 A, I <sub>RR</sub> = 0.25 A		t <sub>RR</sub>	–	35	ns



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

**DATA SHEET #: RA0008E**

**DOC**