



## 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](http://www.ssdi-power.com)

### DESIGNER'S DATA SHEET

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

SDA188

UF

L

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

— = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

#### Reverse Recovery

UF = Ultra Fast

#### Configuration

CT = Common Cathode (polarity C)

CA = Common Anode (polarity A)

D = Doubler (polarity D)

#### Voltage/Family

D = 400V

E = 600V

F = 800V

G = 900V

## SDA188UF Series

**50 Amps**  
**Centertap Ultra Fast**  
**Rectifier Assembly**  
**400 - 900 Volts**

#### Features:

- Low Cost Modules
- Aerospace Quality
- Average Output from 50 Amps
- PIV from 400 to 900 Volts
- Low Reverse Leakage Current
- Anodized Aluminum Case
- Case Electrically Isolated
- Constructed of Hermetically Sealed Diode Cells
- -150 to +150°C Operating and Storage Temperature
- TX, TXV, and Space Level Screening Available. Consult Factory. <sup>2/</sup>
- Configurations: CT = Common Cathode  
CA = Common Anode  
D = Doubler

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SDA188D_UF SDA188E_UF SDA188F_UF SDA188G_UF	$V_{RRM}$ $V_{RWM}$ $V_R$	400 600 800 900	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 55^\circ\text{C}$ )		$I_o$	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$ )		$I_{FSM}$	350	Amps
Operating & Storage Temperature		Top & Tstg	-55 to +150	°C
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	1.0	°C/W

#### Notes:

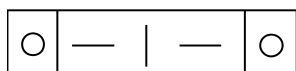
<sup>1/</sup> For ordering information, price, operating curves, and availability – contact factory.

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

#### Polarity and Terminal Orientation

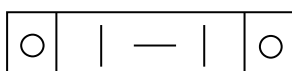
Polarity C

AC + AC



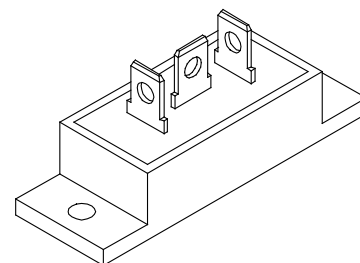
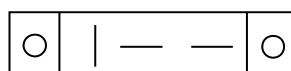
Polarity A

AC - AC



Polarity D

+ AC -



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

**DATA SHEET #: RA0051B**

**DOC**



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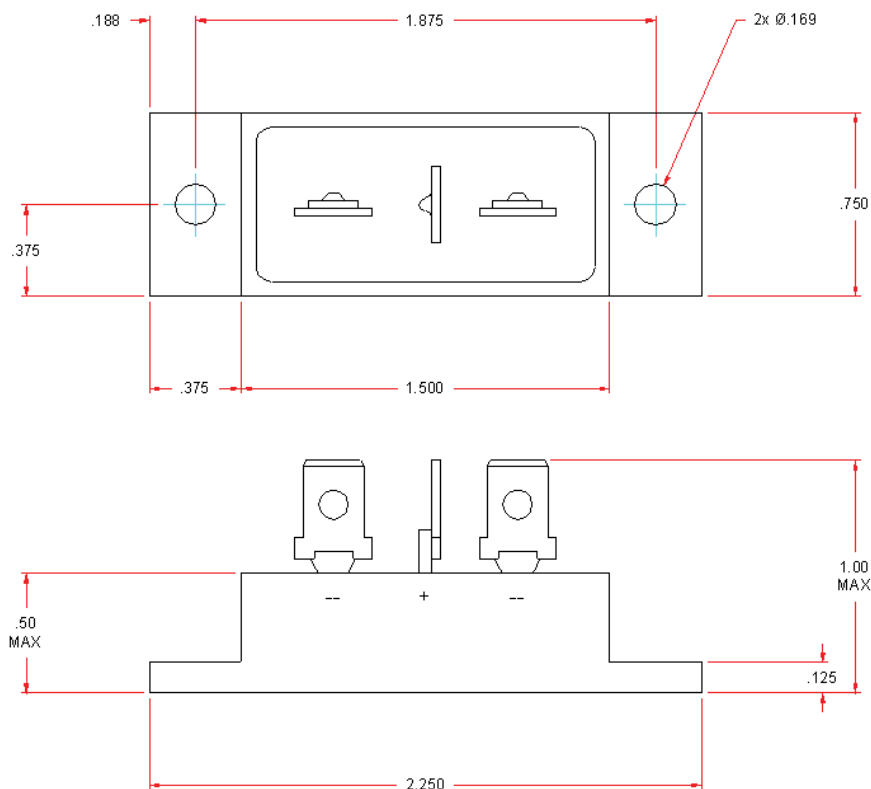
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## SDA188UF Series

### ELECTRICAL CHARACTERISTICS

Part Number <small>CT= Common Cathode CA= Common Anode D= Doubler</small>	Peak Inverse Voltage (per leg)	Average Rectified Forward Current	Average Rectified Forward Current	Peak Surge Current (1 Cycle)	Forward Voltage Drop (per leg) 300 $\mu$ sec Pulse @ 25A	Reverse Leakage Current (per leg) @ rated PIV 300 $\mu$ sec Pulse	Reverse Recovery Time @ $I_F = 0.5$ A, $I_R = 1$ A, $I_{RR} = 0.25$ A,
Symbol	PIV	$I_o$	$I_o$	$I_F$	$V_F$	$I_R$	$t_{rr}$
Units	Volts	Amps	Amps	Amps	Volts	$\mu$ A	ns
Conditions		55°C	100°C	25°C	25°C	25°C	25°C
<b>SDA188D_UF</b>	400	50	33	350	2.0	15	100
<b>SDA188E_UF</b>	600	50	33	350	2.0	15	100
<b>SDA188F_UF</b>	800	50	33	350	2.0	15	100
<b>SDA188G_UF</b>	900	50	33	350	2.0	15	100

#### Case Outline:



TOLERANCE: XX $\pm$ .03  
XXX $\pm$ .020  
FRACTIONAL = NOM DIM

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