

**SUM20F & FSMS  
thru  
SUM50F & FSMS**

**SOLID STATE DEVICES, INC.**

14830 Valley View Blvd \* La Mirada, Ca 90638  
Phone: (562) 404-7855 \* Fax: (562) 404-1773

**Designer's Data Sheet**

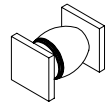
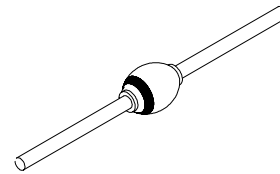
**0.5 AMPS  
2000 - 5000 VOLTS  
180 nsec  
HIGH VOLTAGE  
RECTIFIER**

**FEATURES:**

- **Fast Recovery: 180 nsec Maximum**
- **PIV to 5000 Volts**
- **Hermetically Sealed Axial and Surface Mount Package**
- **Void-Free Construction**
- **Metallurgically Bonded**
- **175°C Maximum Operating Temperature**
  
- **TX, TXV, and Space Level Screening Available**

**AXIAL**

**SURFACE MOUNT  
SQUARE TAB**



**ELECTRICAL CHARACTERISTICS**

Part Number	Peak Inverse Voltage	Average Rectified Current		Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (1 Cycle)	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Impedance
		$I_O$		$I_R$						
Symbol	<b>PIV</b>	<b><math>I_O</math></b>		<b><math>I_R</math></b>		<b><math>V_F</math></b>	<b><math>I_{FSM}</math></b>	<b><math>t_{RR}</math></b>	<b><math>C_J</math></b>	<b><math>\theta_{JL}/\theta_{JE}</math></b>
Units	<b>Volts</b>	<b>mA</b>		<b><math>\mu A</math></b>		<b>Volts</b>	<b>Amps</b>	<b>nsec</b>	<b>pF</b>	<b>°C/W</b>
Conditions		25°C	100°C	25°C	100°C	25°C	25°C	25°C	$V_R = 100V$ $f_r = 1MHZ$	$L = 3/8"$
<b>SUM20F</b>	2000	500	300	1.0	15	8	25	180	10	16
<b>SUM25F</b>	2500	500	300	1.0	15	8	25	180	10	16
<b>SUM30F</b>	3000	500	300	1.0	15	11	25	180	10	16
<b>SUM35F</b>	3500	500	300	1.0	15	11	25	180	10	16
<b>SUM40F</b>	4000	500	300	1.0	15	11	25	180	10	16
<b>SUM50F</b>	5000	500	300	1.0	15	11	25	180	10	16

**NOTES:**

1. Operating and testing over 10,000 V/inch may require encapsulation or immersion in suitable dielectric material.
2. Maximum forward voltage measured with instantaneous forward pulse of 300 $\mu$ sec minimum.
3. Maximum lead/end tab temperature for soldering is 250°C, 3/8" from case for 5 sec maximum.
4. Operating and Storage temperature: -65 to +175°C.
5. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ ,  $T_A = 25°C$ .

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

**DATA SHEET # : RC0038A**

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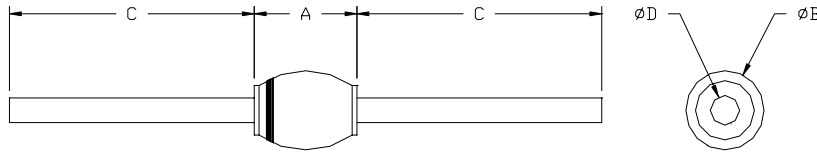
PRELIMINARY



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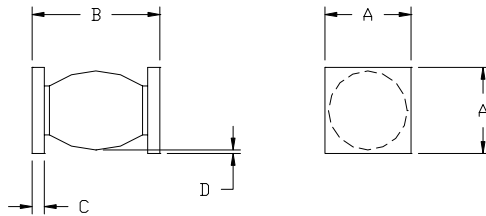
**PACKAGE OUTLINE: AXIAL RECTIFIER**



**DIMENSIONS**

DIM	MIN.	MAX.
A	--	.300"
B	.065"	.165"
C	1.00"	--
D	.047"	.053"

**CASE OUTLINE: SURFACE MOUNT SQUARE TAB (SMS)**



**DIMENSIONS**

DIM	MIN.	MAX.
A	170	.180"
B	.285"	.325"
C	.020"	.030"
D	.002"	--

**NOTES:**

Consult manufacturing for operating curves.