



# SOLID STATE DEVICES, INC.

14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
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## Designer's Data Sheet

### FEATURES:

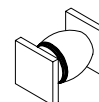
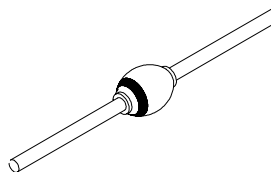
- Ultra Fast Recovery: 90 nsec Maximum
- PIV to 6000 Volts
- Hermetically Sealed Axial and Surface Mount Package
- Void-Free Construction
- Metallurgically Bonded
- 175°C Maximum Operating Temperature
- Replacement for 1N6512 thru 1N6518 and 1N6520 thru 1N6526 in Many Applications.
- TX, TXV, and Space Level Screening Available
- Available in Fast and Hyper Fast versions. Contact Factory.

**SDH20UF & UFSMS  
 thru  
 SDH60UF & UFSMS**

**1 - 1.5 AMPS  
 2000 - 6000 VOLTS  
 ULTRA FAST RECOVERY  
 HIGH VOLTAGE  
 RECTIFIER**

AXIAL

SURFACE MOUNT  
 (SMS)



## 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	
		$I_0$		$I_R$ @ PIV						$\theta_{JE}$	$\theta_{JL}$
Symbol	PIV	$I_0$		$I_R$ @ PIV		$V_F$ <sup>2/</sup>	$I_{FSM}$	$t_{RR}$ <sup>5/</sup>	$C_J$	$^{\circ}C/W$	
Units	Volts	A		$\mu A$		Volts	Amps	nsec	pF	$^{\circ}C/W$	
Conditions		25°C	100°C	25°C	100°C	25°C	25°C	25°C	$V_R = 100V$ $f_r = 1MHZ$		L=1/8"
<b>SDH20UF</b>	2000	1.5	1.0	1.0	25	7.5	60	90	10	4	8
<b>SDH25UF</b>	2500	1.5	1.0	1.0	25	7.5	60	90	10	4	8
<b>SDH30UF</b>	3000	1.5	1.0	1.0	25	7.5	60	90	10	4	8
<b>SDH40UF</b>	4000	1.0	0.5	1.0	25	10.5	40	90	8	4	8
<b>SDH50UF</b>	5000	1.0	0.5	1.0	25	10.5	40	90	8	4	8
<b>SDH60UF</b>	6000	1.0	0.5	1.0	25	10.5	40	90	8	4	8

### NOTES:

1. Operating and testing over 10,000 V/inch may require encapsulation or immersion in suitable dielectric material.
2.  $I_F = I_0$ ; 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:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ ,  $T_A = 25^{\circ}C$ .

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

**DATA SHEET # : RC0059C**

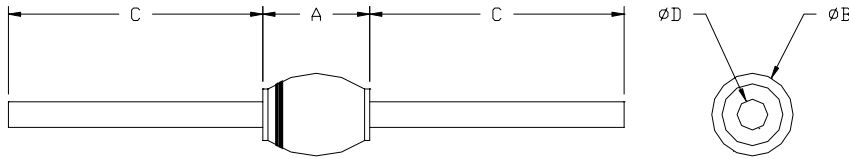
**SDH20UF & UFSMS  
thru  
SDH60UF & UFSMS**



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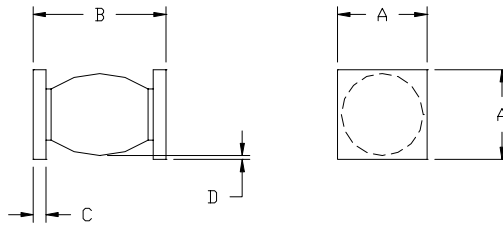
**PACKAGE OUTLINE: AXIAL RECTIFIER**



**DIMENSIONS**

DIM	MIN.	MAX.
A	0.230"	0.270"
B	--	0.180"
C	1.00"	--
D	0.047"	0.053"

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



**DIMENSIONS**

DIM	MIN.	MAX.
A	0.195"	0.205"
B	0.280"	0.320"
C	0.020"	0.030"
D	0.002"	--

**NOTES:**

Consult manufacturing for operating curves.