



## SOLID STATE DEVICES, INC.

14830 Valley View Blvd \* La Mirada, Ca 90638

Phone: (562) 404-7855 \* Fax: (562) 404-1773

ssdi@ssdi-power.com \* www.ssdi-power.com

### Designer's Data Sheet

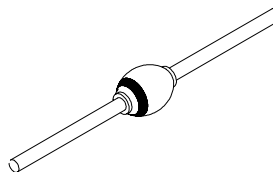
#### FEATURES:

- 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.

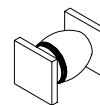
## SDH20UF & UFSMS thru SDH60UF & UFSMS

**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 |                 |
|-------------|----------------------|---------------------------|-------|-------------------------|-------|------------------------------|---------------------------------|-------------------------------|------------------------------------------------|---------------------------|-----------------|
| Symbol      | PIV                  | I <sub>0</sub>            |       | I <sub>R</sub> @ PIV    |       | V <sub>F</sub> <sup>2/</sup> | I <sub>FSM</sub>                | t <sub>RR</sub> <sup>5/</sup> | C <sub>J</sub>                                 | θ <sub>JE</sub>           | θ <sub>JL</sub> |
| Units       | Volts                | A                         |       | μA                      |       | Volts                        | Amps                            | nsec                          | pF                                             | °C/W                      |                 |
| Conditions  |                      | 25°C                      | 100°C | 25°C                    | 100°C | 25°C                         | 25°C                            | 25°C                          | V <sub>R</sub> = 100V<br>f <sub>r</sub> = 1MHZ |                           | L=1/8"          |
| SDH20UF     | 2000                 | 1.5                       | 1.0   | 1.0                     | 25    | 7.5                          | 60                              | 90                            | 10                                             | 4                         | 8               |
| SDH25UF     | 2500                 | 1.5                       | 1.0   | 1.0                     | 25    | 7.5                          | 60                              | 90                            | 10                                             | 4                         | 8               |
| SDH30UF     | 3000                 | 1.5                       | 1.0   | 1.0                     | 25    | 7.5                          | 60                              | 90                            | 10                                             | 4                         | 8               |
| SDH40UF     | 4000                 | 1.0                       | 0.5   | 1.0                     | 25    | 10.5                         | 40                              | 90                            | 8                                              | 4                         | 8               |
| SDH50UF     | 5000                 | 1.0                       | 0.5   | 1.0                     | 25    | 10.5                         | 40                              | 90                            | 8                                              | 4                         | 8               |
| SDH60UF     | 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<sub>F</sub> = I<sub>0</sub>; Maximum forward voltage measured with instantaneous forward pulse of 300μsec 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<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A, T<sub>A</sub> = 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 # : RC0059C**

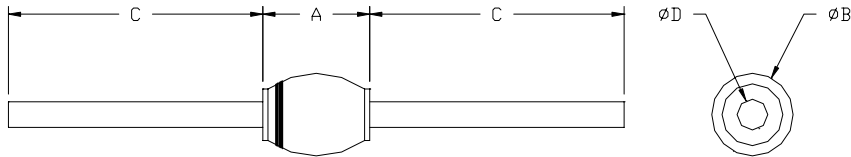
# SDH20UF & UFSMS thru SDH60UF & UFSMS



**SOLID STATE DEVICES, INC.**

14830 Valley View Blvd \* La Mirada, Ca 90638  
Phone: (562) 404-7855 \* Fax: (562) 404-1773  
ssdi@ssdi-power.com \* www.ssdi-power.com

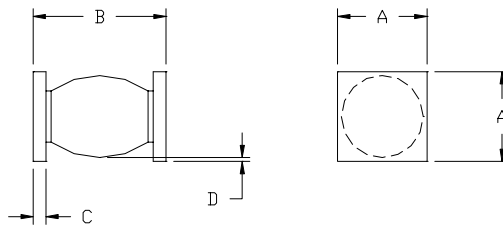
## PACKAGE OUTLINE: AXIAL RECTIFIER



### 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.