



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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## SDH20UF & UFSMS thru SDH60UF & UFSMS

### Designer's Data Sheet

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

SDH \_ UF \_ \_

L Screening<sup>2/</sup> = None  
 TX = TX Level  
 TXV = TXV Level  
 S = S Level

L Package  
 \_ = Axial  
 SMS = Surface Mount Square Tab

L Recovery Time  
 UF = Ultra Fast

L Voltage  
 20 = 2000 V  
 25 = 2500 V  
 30 = 3000 V  
 40 = 4000 V  
 50 = 5000 V  
 60 = 6000 V

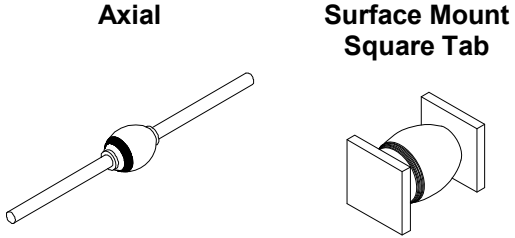
### 1-1.5 AMP 2000-6000 VOLTS ULTRA FAST RECOVERY HIGH VOLTAGE RECTIFIER

- 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<sup>2/</sup>
  - Available in Fast and Hyper Fast Versions. Contact Factory.

### ELECTRICAL CHARACTERISTICS

Part Number	Peak Inverse Voltage	Average Rectifier Current		Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (1 Cycle)	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Impedance	
		I <sub>0</sub>	I <sub>0</sub>	IR	IR					θ <sub>JE</sub>	θ <sub>JL</sub>
Symbol	PIV	I <sub>0</sub>		IR		V <sub>F</sub>	I <sub>FSM</sub>	t <sub>RR</sub>	C <sub>J</sub>	°C/W	
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	25°C	VR = 100V f <sub>T</sub> = 1MHZ	
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

1/ For Ordering Information, Price, and Availability – Contact Factory.  
 2/ Screening based on MIL-PRF-19500. Screening flows available on request.  
 3/ Operating and testing over 10,000 V/inch may require encapsulation or immersion in a suitable dielectric material.  
 4/ I<sub>F</sub> = I<sub>0</sub>; Max. forward voltage measured with instantaneous forward pulse of 300μsec minimum.  
 5/ Max. Lead/End Tab temp. for soldering is 250°C, 3/8" from case for 5 sec maximum.  
 6/ Operating and storage temperature: -65°C to +175°C.  
 7/ Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=.25A, T<sub>A</sub>=25°C.



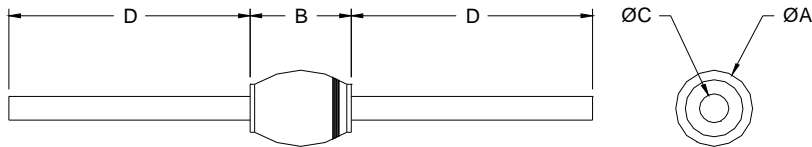


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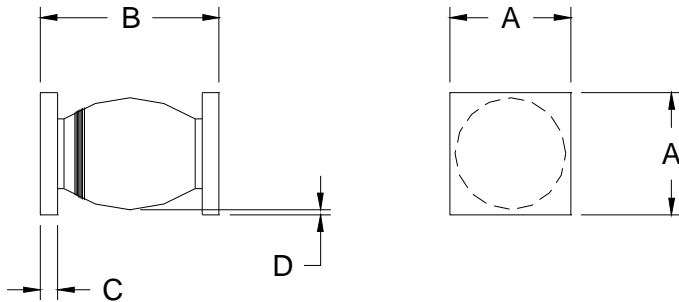
**SDH20UF & UFSMS  
 thru  
 SDH60UF & UFSMS**

**PACKAGE OUTLINE: Axial**



DIMENSIONS		
DIM	MIN	MAX
A	---	0.180"
B	.230"	.270"
C	0.047"	0.053"
D	1.00"	—

**PACKAGE OUTLINE: Surface Mount Square Tab**



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.