



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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## SRH20UF thru SRH30UF Series

**1.5 AMP  
 2,000 - 3,000 VOLTS  
 ULTRAFAST RECOVERY  
 HIGH VOLTAGE RECTIFIER**

### Designer's Data Sheet

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

SRH      UF          

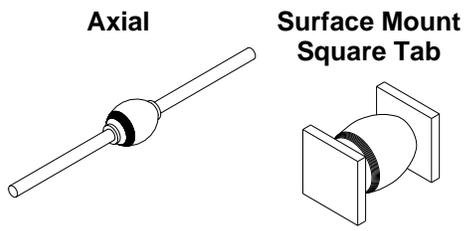
- Screening<sup>2/</sup>
  - = None
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- Package
  - = Axial
  - SMS = Surface Mount Square Tab
- Recovery Time
  - UF = Ultrafast
- Voltage
  - 20 = 2,000 V
  - 25 = 2,500 V
  - 30 = 3,000 V

- ### FEATURES:
- Ultrafast Recovery: 90 nsec Maximum
  - PIV to 3 KV
  - Hermetically Sealed Axial and Surface Mount Package
  - Void-Free Ceramic Frit Glass Construction
  - High Temperature Category I Eutectic Metallurgical Bond
  - Excellent Thermal Shock Performance
  - For Use in High Voltage Systems
  - 175°C Maximum Operating Temperature
  - Smaller-Sized Replacement for 1N6512 thru 1N6515 and 1N6520 thru 1N6523 in Many Applications
  - TX, TXV, and Space Level Screening Available<sup>2/</sup>
  - Available in Fast and Hyper Fast Versions. Contact Factory.
  - Limited Availability – Replacement Datasheet: RC0224

### ELECTRICAL CHARACTERISTICS

Part Number	Peak Inverse Voltage	Average Rectifier Current		Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (see note 8)	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Resistance	
		I <sub>O</sub>	I <sub>O</sub>	I <sub>R</sub>	I <sub>R</sub>					R <sub>θJE</sub>	R <sub>θJL</sub>
Symbol	PIV	I <sub>O</sub>		I <sub>R</sub>		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		
Conditions		25°C	100°C	25°C	100°C	25°C	25°C	25°C	25°C	VR = 100 V f <sub>T</sub> = 1 MHz	L = 1/8"
SRH20UF	2000	1.5	1.0	0.5	15	6.5	60	90	10	4	8
SRH25UF	2500	1.5	1.0	0.5	15	6.5	60	90	10	4	8
SRH30UF	3000	1.5	1.0	0.5	15	6.5	60	90	10	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>O</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> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>RR</sub> = .25 A, T<sub>A</sub> = 25°C.  
 8/ Surge at 1 ms square pulse. 1 cycle.



**This device is a replacement for SSDI's SDH20UF through SDH30UF family of devices.  
 This device offers superior performance in V<sub>F</sub> & I<sub>R</sub>.**

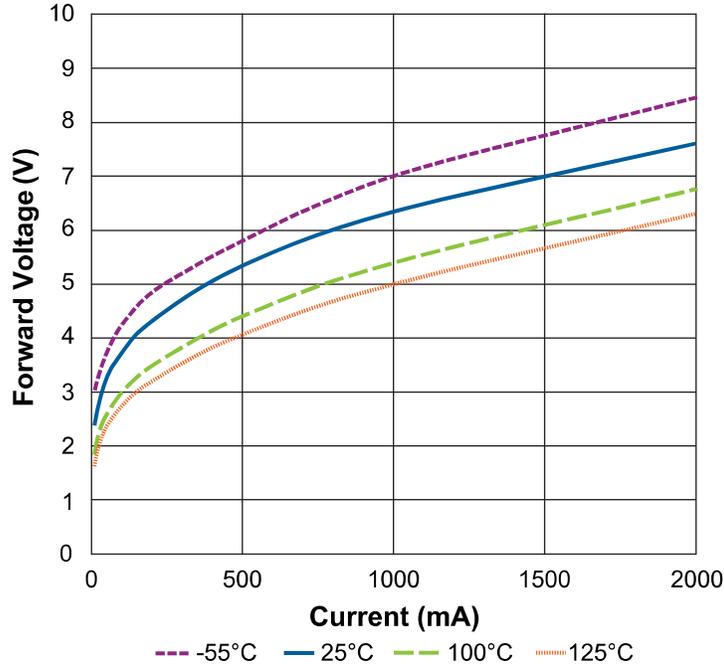


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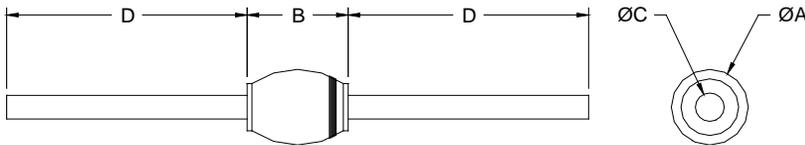
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# SRH20UF thru SRH30UF Series

## SRH30UF Typical VF

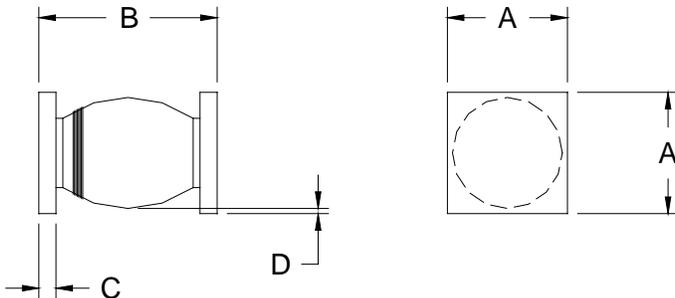


### PACKAGE OUTLINE: Axial



DIMENSIONS		
DIM	MIN	MAX
A	—	0.150"
B	0.200"	0.240"
C	0.048"	0.052"
D	1.00"	—

### PACKAGE OUTLINE: Surface Mount Square Tab



DIMENSIONS		
DIM	MIN	MAX
A	0.170"	0.180"
B	0.250"	0.295"
C	0.020"	0.030"
D	0.002"	—

**Notes:**

Consult manufacturing for operating curves.

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

**DATA SHEET #: RC0166C**

**DOCX**