



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

**SDH20F & FSMS
 thru
 SDH60F & FSMS**

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

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SDH ___ F ___

L Screening^{2/} = None
 TX = TX Level
 TXV = TXV Level
 S = S Level

 L Package
 ___ = Axial
 SMS = Surface Mount Square Tab

 L Recovery Time
 F = Fast Recovery

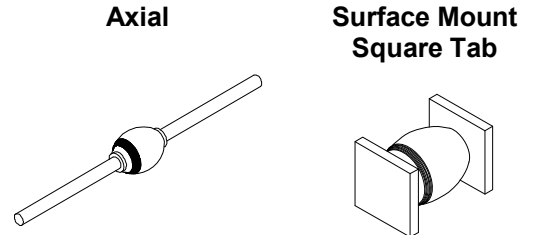
 L Voltage
 20 = 2000 V
 25 = 2500 V
 30 = 3000 V
 40 = 4000 V
 50 = 5000 V
 60 = 6000 V

- FEATURES:**
- Fast Recovery: 180 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^{2/}
 - Available in Ultra 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 ₀	I ₀	IR	IR					θ _{JE}	θ _{JL}
Symbol	PIV	I ₀		IR		V _F	I _{FSM}	t _{RR}	C _J	°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 _T = 1MHZ	
SDH20F	2000	1.5	1.0	1.0	15	6.0	60	180	10	4	8
SDH25F	2500	1.5	1.0	1.0	15	6.0	60	180	10	4	8
SDH30F	3000	1.5	1.0	1.0	15	6.0	60	180	10	4	8
SDH40F	4000	1.0	0.5	1.0	15	9.5	40	180	8	4	8
SDH50F	5000	1.0	0.5	1.0	15	9.5	40	180	8	4	8
SDH60F	6000	1.0	0.5	1.0	15	9.5	40	180	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_F = I₀; 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_F=0.5A, I_R=1.0A, I_{RR}=.25A, T_A=25°C.



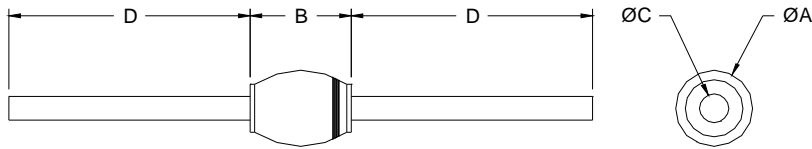


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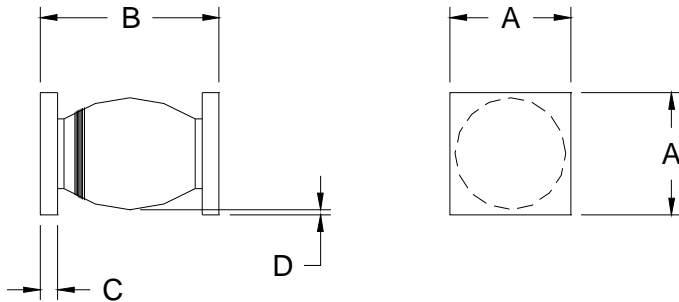
**SDH20F & FSMS
 thru
 SDH60F & FSMS**

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.