



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

**SDH20HF & HFSMS
 thru
 SDH60HF & HFSMS**

**0.6-1 AMP
 2000-6000 VOLTS
 HYPER FAST RECOVERY
 HIGH VOLTAGE
 RECTIFIER**

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SDH ___ HF ___

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

L Package ___ = Axial
 SMS = Surface Mount Square Tab

Recovery Time
 L HF = Hyper Fast

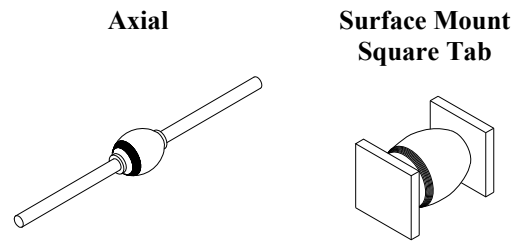
L Voltage
 20 = 2000 V
 25 = 2500 V
 30 = 3000 V
 40 = 4000 V
 50 = 5000 V
 60 = 6000 V

- FEATURES:**
- Hyper Fast Recovery: 40 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 1N6512-18, 1N6520-26, SUM20HF-60HF, and SAM20HF-60HF series
 - TX, TXV, and Space Level Screening Available^{2/}
 - 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 Resistance	
		I _O	I _O	IR	IR					θ _{JE}	θ _{JL}
Symbol	PIV	I _O		IR		V _F	I _{FSM}	t _{RR}	C _J	θ _{JE}	θ _{JL}
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	VR = 100V f _T = 1MHZ		L = 1/8"
SDH20HF	2000	1.0	0.5	1.0	50	8.2	40	40	10	4	8
SDH25HF	2500	1.0	0.5	1.0	50	8.2	40	40	10	4	8
SDH30HF	3000	1.0	0.5	1.0	50	8.2	30	40	10	4	8
SDH40HF	4000	0.6	0.3	1.0	50	12	30	40	8	4	8
SDH50HF	5000	0.6	0.3	1.0	50	12	30	40	8	4	8
SDH60HF	6000	0.6	0.3	1.0	50	12	30	40	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 = I_O; 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.
 8/ Surge Test Conditions: 1 ms square wave



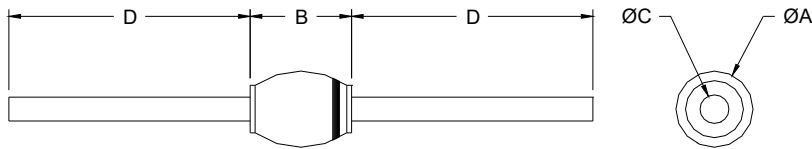


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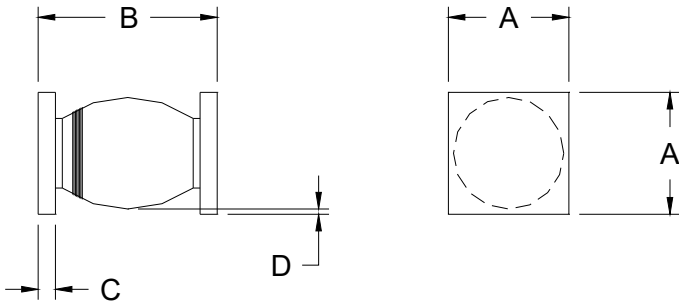
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PACKAGE OUTLINE: Axial



DIMENSIONS		
DIM	MIN	MAX
A	---	0.180"
B	.210"	.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.