SOLID STATE DEVICES, INC.
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SDH20F & FSMS thru SDH60F & FSMS

1 - 1.5 AMPS 2000 - 6000 VOLTS FAST RECOVERY HIGH VOLTAGE RECTIFIER

Designer's Data Sheet

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**
- **Available in Ultra Fast and Hyper Fast versions. Contact Factory**

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_0**		**I_R @ PIV**		**V_F** [2]	**I_{FSM}**	**t_{RR}** [5]	**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	V_R = 100V f_T = 1MHZ		L=1/8"
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

NOTES:

1. Operating and testing over 10,000 V/inch may require encapsulation or immersion in suitable dielectric material.
2. $I_F = I_0$; 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_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A, T_A = 25°C.

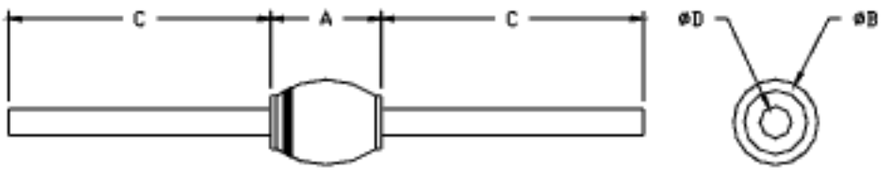
NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET # : RC0058B

SDH20F & FSMS thru SDH60F & FSMS

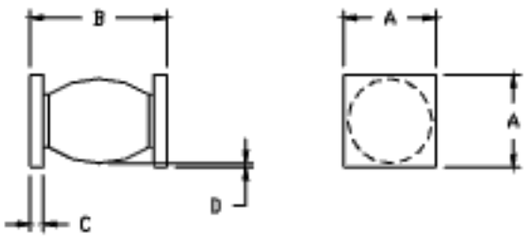
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PACKAGE OUTLINE: AXIAL RECTIFIER



DIMENSIONS		
DIM	MIN.	MAX.
A	0.230	0.270"
B	--	.180"
C	1.00"	--
D	.047"	.053"

CASE OUTLINE: SURFACE MOUNT SQUARE TAB (SMS)



DIMENSIONS		
DIM	MIN.	MAX.
A	0.195	0.205"
B	.280"	.320"
C	.020"	.030"
D	.002"	--

NOTES:
Consult manufacturing for operating curves.