Solid State Devices, Inc.
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SHR25F – SHR100F and SHR25FSMS – SHR100FSMS

Designer's Data Sheet

Part Number / Ordering Information [1/]

SHR__ F __ __

- **Screening**[2/] = None, TX = TX Level, TXV = TXV Level, S = S Level
- **Package** ____ = Axial, SMS = Surface Mount Square Tab
- **Speed** F = Fast
- **Voltage**

25 = 2500	60 = 6000
30 = 3000	80 = 8000
40 = 4000	100 = 10000
50 = 5000	

500 mA
2500 – 10000 VOLTS
150 nsec
HIGH VOLTAGE RECTIFIER

FEATURES:

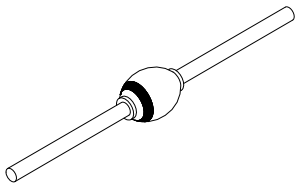
- **High Current Replacement for SHM F Series**
- **Fast Recovery: 150 nsec Maximum**
- **PIV to 10000 Volts**
- **Hermetically Sealed**
- **Metallurgically Bonded**
- **175°C Maximum Operating Temperature**
- **Higher Voltages Available – Contact Factory**
- **Standard, Ultrafast, and Hyperfast Reverse Recovery Versions Available – Contact Factory**
- **TX, TXV, and Space Level Screening Available**[2/]

ELECTRICAL CHARACTERISTICS

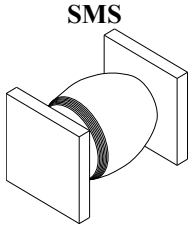
Part Number	Peak Inverse Voltage	Average Rectifier Current			Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (1 Cycle) 8.3 mS sine	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Impedance	
Symbol	**PIV**	**I_O**			**IR @ PIV**		**V_F** [4/]	**I_{FSM}**	**trr**	**C_J**	**θ_{JE}**	**θ_{JL}**
Units	**Volts**	**mA**			**µA**		**Volts**	**Amps**	**nsec**	**pF**	**°C/W**	
Conditions		**25°C**	**100°C** [8/] **Axial @ T_L**	**100°C** [8/] **SMS @ T_{EC}**	**25°C**	**100°C**	**25°C**	**25°C**	**25°C**	**V_R = 100V f_T = 1MHZ**		**L = 3/8"**
SHR25F	**2500**	**500**	**350**	**450**	**1.0**	**10**	**6.5**	**20**	**150**	**6**	**15**	**35**
SHR30F	**3000**	**500**	**350**	**450**	**1.0**	**10**	**6.5**	**20**	**150**	**6**	**15**	**35**
SHR40F	**4000**	**500**	**350**	**450**	**1.0**	**10**	**6.5**	**20**	**150**	**6**	**15**	**35**
SHR50F	**5000**	**400**	**250**	**350**	**1.0**	**10**	**9.5**	**18**	**150**	**4**	**15**	**35**
SHR60F	**6000**	**400**	**250**	**350**	**1.0**	**10**	**9.5**	**18**	**150**	**4**	**15**	**35**
SHR80F	**8000**	**250**	**150**	**200**	**1.0**	**10**	**13.0**	**10**	**150**	**3**	**18**	**42**
SHR100F	**10000**	**250**	**150**	**200**	**1.0**	**10**	**13.0**	**10**	**150**	**3**	**18**	**42**

1/ For ordering information, price, operating curves, 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/ Max. Instantaneous forward voltage measured @ 25°C rated Io pulsed.
5/ Max. End Tab temp. for soldering is 250°C for 5 sec maximum.
6/ Operating and storage temperature: -65°C to +175°C.
7/ Reverse Recovery Test Conditions: IF=500mA, IR=1000mA, IRR=250mA, TA=25°C.
8/ Derate Io current linearly from 25°C to 100°C and from 100°C to 175°C.

Axial Leaded



SMS



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: RC0196A**	**DOC**

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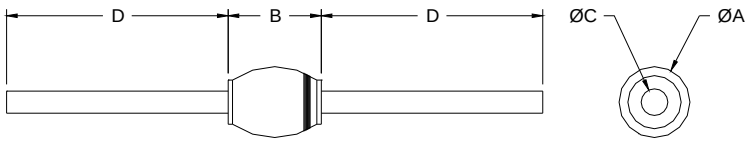
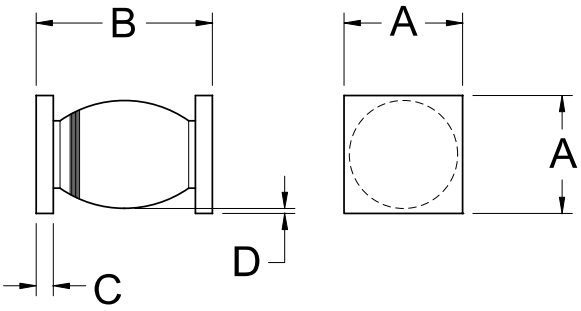
SHR25F – SHR100F
and
SHR25FSMS – SHR100FSMS

PACKAGE OUTLINE:	Dimensions	Min	Max
Axial Lead 	**A**	**---**	**.135**
	B (SHR25 – 40)	**.195**	**.235**
	B (SHR50 – 60)	**.210**	**.255**
	B (SHR80 – 100)	**.250**	**.310**
	C	**.028**	**.031**
	D	**1.000**	**---**
Surface Mount Square Tab 	**A**	**.132**	**.140**
	B (SHR25 – 40)	**.240**	**.305**
	B (SHR50 – 60)	**.255**	**.335**
	B (SHR80 – 100)	**.295**	**.370**
	C	**.025**	**.033**
	D	**.002**	**---**