



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SHR

L Screening^{2/}

= None

TX = TX Level

TXV = TXV Level

S = S Level

Package

____ = Axial

SMS = Surface Mount Square Tab

L Voltage

25 = 2500

30 = 3000

40 = 4000

50 = 5000

60 = 6000

80 = 8000

100 = 10000

SHR25 – SHR100

and

SHR25SMS – SHR100SMS

500 mA

2500 – 10000 VOLTS

5 µsec

HIGH VOLTAGE RECTIFIER

FEATURES:

- High Current Replacement for SHM Diode Series
- Standard Recovery: 5 µsec Maximum
- PIV to 10000 Volts
- Hermetically Sealed
- Metallurgically Bonded
- 175°C Maximum Operating Temperature
- Higher Voltages Available – Contact Factory
- Fast, 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 ₀			I _R @ PIV		V _F ^{4/}	I _{FSM}	trr	C _J	θ _{JE}	θ _{JL}
Units		mA			µA		Volts	Amps	µsec	pF	°C/W	
Conditions	Volts	25°C	100°C ^{8/}		25°C	100°C	25°C	25°C	25°C	V _R = 100V f _T = 1 MHZ		L = 3/8"
			Axial @ T _L	SMS @ T _{EC}								
SHR25	2500	500	350	450	1.0	10	5.5	22	5	6	15	35
SHR30	3000	500	350	450	1.0	10	5.5	22	5	6	15	35
SHR40	4000	500	350	450	1.0	10	5.5	22	5	6	15	35
SHR50	5000	400	250	350	1.0	10	8.0	20	5	4	15	35
SHR60	6000	400	250	350	1.0	10	8.0	20	5	4	15	35
SHR80	8000	250	150	200	1.0	10	12.0	12	5	3	18	42
SHR100	10000	250	150	200	1.0	10	12.0	12	5	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 I₀ pulsed.

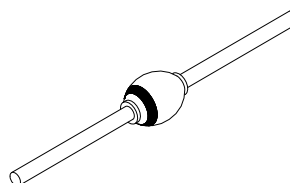
5/ Max. End Tab temp. for soldering is 250°C for 5 sec maximum.

6/ Operating and storage temperature: -65°C to +175°C.

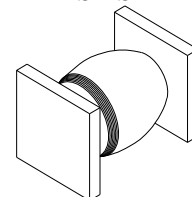
7/ Reverse Recovery Test Conditions: IF=500mA, IRR=250mA, TA=25°C.

8/ Derate I₀ 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.

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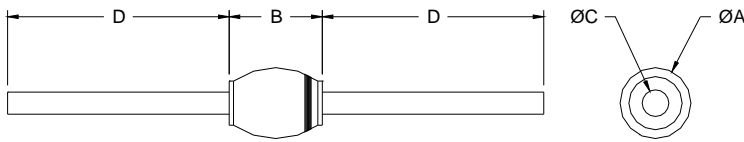
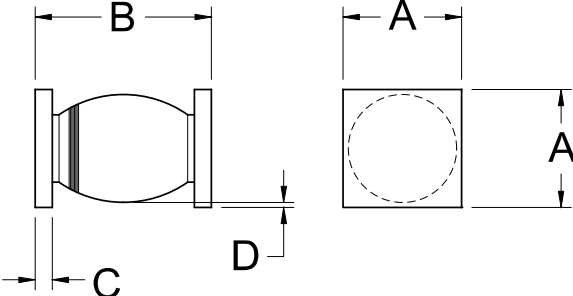
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**SHR25 – SHR100
 and
 SHR25SMS – SHR100SMS**

PACKAGE OUTLINE:		Dimensions	Min	Max
Axial Lead  <p>The diagram shows a side view of an axial lead package with dimensions D, B, and D. A cross-sectional view shows dimensions ØC and ØA.</p>		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  <p>The diagram shows a side view of a surface mount square tab package with dimensions B, C, and D. A top view shows a square with side length A and a circular pad with diameter A.</p>		A	.132	.140
		B (SHR25 – 40)	.240	.305
		B (SHR50 – 60)	.255	.335
		B (SHR80 – 100)	.295	.370
		C	.025	.033
		D	.002	---

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