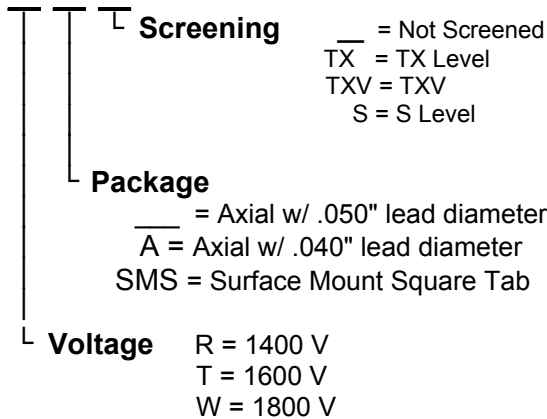


DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SDR6



SDR6W series

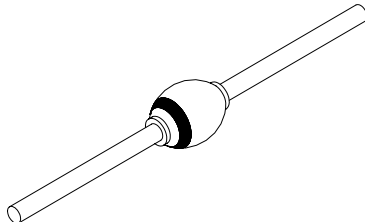
6A 5 μ sec
1400 to 1800 V
Standard Recovery Rectifier

Features:

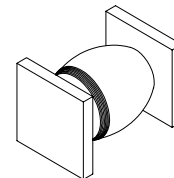
- Standard Recovery: 5 usec Maximum
- High Surge Rating: 75 Amps @ 8.3 ms and 500A @ 100 μ S
- Low Reverse Leakage Current: 5 μ A
- Low Junction Capacitance: 40 pF
- Low Thermal Resistance: 8 - 12 $^{\circ}$ C/W
- Single Chip Construction
- Available in Fast and Ultra Fast Speeds. Consult Factory.
- TX, TXV, and S Level Screening iaw MIL-PRF-19500 Available

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse Voltage	SDR6R SDR6T SDR6W	V_{RRM}	1400 1600 1800	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave)	$T_L @ 1/8" = 25^{\circ}$ C max $T_{TAB} = 55^{\circ}$ C max	I_o	6	Amps
Peak Surge Current ^{2/} (8.3 ms Pulse, Half Sine Wave)	$T_L @ 1/8" = 25^{\circ}$ C max $T_{TAB} = 55^{\circ}$ C max	I_{FSM}	75	Amps
Operating & Storage Temperature		$T_{OP} \& T_{STG}$	-65 to +175	$^{\circ}$ C
Maximum Total Thermal Resistance	Axial @ 1/8 " SMS	$R_{\theta JL}$	12 8	$^{\circ}$ C/W

Axial



Surface Mount Square Tab (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 #: RC0094A

DOC



Solid State Devices, Inc.

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Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDR6W series

Electrical Characteristics		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 6A$, 300 – 500 μ sec Pulse)	$T_A = 25^\circ C$	V_{F1}	—	1.10	1.16	V_{DC}
	$T_A = -55^\circ C$	V_{F2}	—	1.20	1.30	
Reverse Leakage Current (100% of rated V_R , 300 μ s pulse min.)	$T_A = 25^\circ C$	I_{R1}	—	1.0	5.0	μA
	$T_A = 100^\circ C$	I_{R2}	—	10	50	
Reverse Recovery Time ($I_F = 0.5A$, $I_R = 1A$, $I_{RR} = 0.25A$, $T_A = 25^\circ C$)	$T_A = 25^\circ C$	t_{RR}	—	1.5	5	μ sec
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ C$, $f = 1MHz$)	$T_A = 25^\circ C$	C_J	—	22	40	pF

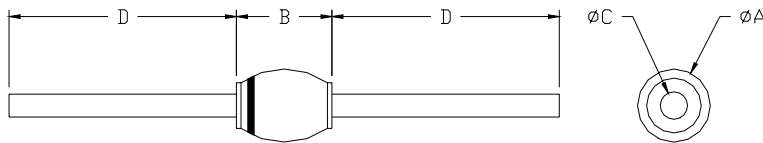
NOTES:

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Surge rated at 500A maximum, pulse width = 100 μ sec.

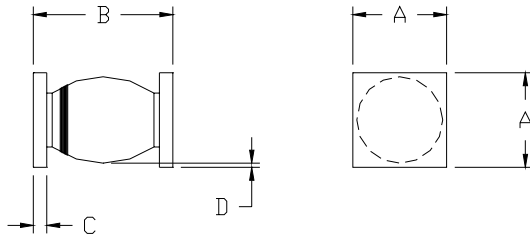
Available Part Numbers:	SDR6W	SDR6WA	SDR6WSMS
	SDR6T	SDR6TA	SDR6TSMS
	SDR6R	SDR6RA	SDR6RSMS

Case Outline: (Axial)



DIM	MIN	MAX
A	—	0.168"
B	0.135"	0.156"
C (std)	0.047"	0.053"
C (A outline)	0.037"	0.043"
D	1.00"	—

Case Outline: (SMS)



DIM	MIN	MAX
A	0.173"	0.177"
B	0.180"	0.210"
C	0.022"	0.028"
D	0.002"	—

Note: Dimensions prior to soldering.

NOTE: All specifications are subject to change without notification.
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DATA SHEET #: RC0094A

DOC