SSD		SDR1D thru SDR1N			
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 Designer's Data Sheet		1.0 AMPS 200 — 1200 VOLTS 50 – 80 nsec ULTRA FAST RECTIFIER			
Designer's Data SheetPart Number/Ordering Information $\frac{1}{}$ SDR1 $\_$		FEATURES: Ultra Fast Recovery: 50-80 ns Max @ 25°C <sup>4/</sup> 80-130 ns Max @ 100°C <sup>4/</sup> Single Chip Construction PIV to 1200 Volts Low Reverse Leakage Current Hermetically Sealed For High Efficiency Applications Metallurgically Bonded TX, TXV, and S-Level Screening Available <sup>2/</sup> Available in Surface Mount (SM) and Square Tab Surface Mount (SMS) Versions (Ref. RU0003) Hyper Fast Version available (Ref. RH0119)			
MAXIMUM RATINGS <sup>3/</sup>					
RATING	(DD 10	SYMBOL	VALUE	UNIT	
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR1D SDR1G SDR1J SDR1K SDR1M SDR1N	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	200 400 600 800 1000 1200	Volts	
Rectified Forward Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^{\circ}$ C)		I <sub>0</sub>	1	Amp	
Peak Surge Current (8.3 msec Pulse, Half Sine Wave Superimposed on Io, allow junction t equilibrium between pulses, $T_A = 25^{\circ}C$ )	o reach	I <sub>FSM</sub>	25	Amps	
Operating & Storage Temperature		$T_{OP}$ and $T_{STG}$	-65 to +175	°C	

## **NOTES:**

- 1/ For Ordering Information, Price, and Availability- Contact Factory.
- 2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.
- 3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.
- <u>4</u>/ Recovery Conditions:  $I_F = 0.5$  Amp,  $I_R = 1.0$  Amp,  $I_{RR}$  to .25 Amp.
- 5/ For information on operating curves, contact factory.

Thermal Resistance, Junction to Lead, L = 3/8"

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 $R_{\theta JL}$ 

DOC

°C/W

45

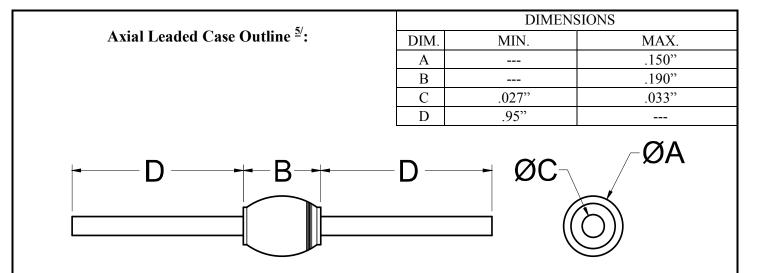
**Axial Leaded** 



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## SDR1D thru SDR1N

ELECTRICAL CHARACTERISTICS <sup>3/</sup>				
CHARACTERISTICS			VALUE	UNIT
Instantaneous Forward Voltage Drop ( $I_F = 1$ Adc, 300- 500 $\mu$ s Pulse, $T_A = 25^{\circ}$ C)	SDR1D thru SDR1J SDR1K thru SDR1N	$V_{F1}$	1.70 1.90	Vdc
Instantaneous Forward Voltage Drop ( $I_F = 1$ Adc, 300- 500 $\mu$ s Pulse, $T_A = -55^{\circ}$ C)	SDR1D thru SDR1J SDR1K thru SDR1N	$V_{F2}$	2.10 2.30	Vdc
Maximum Reverse Leakage Current (Rated V <sub>R</sub> , 300 $\mu$ s Pulse Minimum, T <sub>A</sub> = 25°C)		I <sub>R1</sub>	5	μΑ
Maximum Reverse Leakage Current (Rated $V_R$ , 300 µs Pulse Minimum , $T_A = 100$ °C)		I <sub>R2</sub>	500	μΑ
Junction Capacitance ( $V_R = 10Vdc$ , $T_A = 25^{\circ}C$ , $f = 1MHz$ )		C <sub>J</sub>	24	pf
Maximum Reverse Recovery Time <sup>4</sup> /	SDR1D thru SDR1J SDR1K SDR1M SDR1N	t <sub>rr</sub>	50 60 70 80	ns



<b>NOTE:</b> All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: RU0005H	DOC
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