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 ^{4/} 80-130 ns Max @ 100°C ^{4/} 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 ^{2/} Available in Surface Mount (SM) and Square Tab Surface Mount (SMS) Versions (Ref. RU0003) Hyper Fast Version available (Ref. RH0119)			
MAXIMUM RATINGS ^{3/}					
RATING	(DD 10	SYMBOL	VALUE	UNIT	
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR1D SDR1G SDR1J SDR1K SDR1M SDR1N	V _{RRM} V _{RWM} V _R	200 400 600 800 1000 1200	Volts	
Rectified Forward Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^{\circ}$ C)		I ₀	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 _{FSM}	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

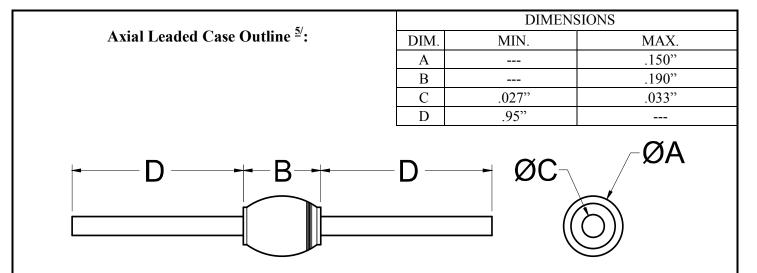
Axial Leaded



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SDR1D thru SDR1N

ELECTRICAL CHARACTERISTICS ^{3/}				
CHARACTERISTICS			VALUE	UNIT
Instantaneous Forward Voltage Drop ($I_F = 1$ Adc, 300- 500 μ 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 μ 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 _R , 300 μ s Pulse Minimum, T _A = 25°C)		I _{R1}	5	μΑ
Maximum Reverse Leakage Current (Rated V_R , 300 µs Pulse Minimum , $T_A = 100$ °C)		I _{R2}	500	μΑ
Junction Capacitance ($V_R = 10Vdc$, $T_A = 25^{\circ}C$, $f = 1MHz$)		C _J	24	pf
Maximum Reverse Recovery Time ⁴ /	SDR1D thru SDR1J SDR1K SDR1M SDR1N	t _{rr}	50 60 70 80	ns



NOTE: 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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