



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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SDR1D thru SDR1N

1.0 AMPS

200 — 1200 VOLTS

50 – 80 nsec ULTRA FAST RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR1 — — —

L Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Package Type

— = Axial Leaded

Family

D = 200V

K = 800V

G = 400V

M = 1000V

J = 600V

N = 1200V

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)

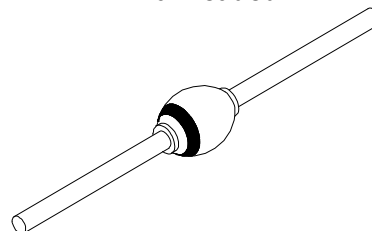
MAXIMUM RATINGS ^{3/}

RATING	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 Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^\circ\text{C}$)	I_O	1	Amp
Peak Surge Current (8.3 msec Pulse, Half Sine Wave Superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)	I_{FSM}	25	Amps
Operating & Storage Temperature	T_{OP} and T_{STG}	-65 to +175	°C
Thermal Resistance, Junction to Lead, L = 3/8"	$R_{\theta JL}$	45	°C/W

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.
^{4/} 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.

Axial Leaded



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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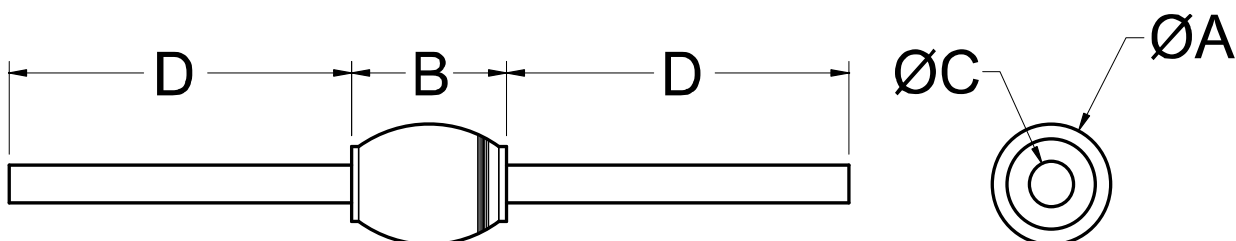
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**SDR1D
thru
SDR1N****ELECTRICAL CHARACTERISTICS ^{3/}**

CHARACTERISTICS		SYMBOL	VALUE	UNIT
Instantaneous Forward Voltage Drop ($I_F = 1\text{Adc}$, 300- 500 μs Pulse, $T_A = 25^\circ\text{C}$)	SDR1D thru SDR1J SDR1K thru SDR1N	V_{F1}	1.70 1.90	Vdc
Instantaneous Forward Voltage Drop ($I_F = 1\text{Adc}$, 300- 500 μs Pulse, $T_A = -55^\circ\text{C}$)	SDR1D thru SDR1J SDR1K thru SDR1N	V_{F2}	2.10 2.30	Vdc
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 25^\circ\text{C}$)		I_{R1}	5	μA
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 100^\circ\text{C}$)		I_{R2}	500	μA
Junction Capacitance ($V_R = 10\text{Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	24	pf
Maximum Reverse Recovery Time ^{4/}	SDR1D thru SDR1J SDR1K SDR1M SDR1N	t_{rr}	50 60 70 80	ns

Axial Leaded Case Outline ^{5/}:**DIMENSIONS**

DIM.	MIN.	MAX.
A	---	.150"
B	---	.190"
C	.027"	.033"
D	.95"	---



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