Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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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 ___ ___ ___

- **Screening** [2/]
  - __ = Not Screened
  - TX = TX Level
  - TXV = TXV
  - S = S Level
- **Package Type**
  - __ = Axial Leaded
- **Family**
  - D = 200V
  - G = 400V
  - J = 600V
  - K = 800V
  - M = 1000V
  - N = 1200V

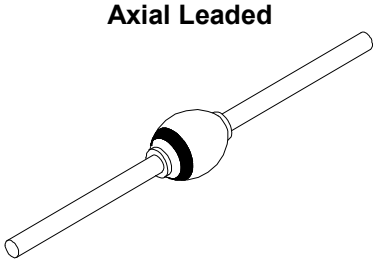
FEATURES:

- **Ultra Fast Recovery: 50-80 ns Max @ 25ºC** [4/]
  80-130 ns Max @ 100ºC [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 Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25ºC)		I_O	1	Amp
Peak Surge Current (8.3 msec Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25ºC)		I_{FSM}	25	Amps
Operating & Storage Temperature		T_{OP} and T_{STG}	-65 to +175	ºC
Thermal Resistance, Junction to Lead, L = 3/8"		$R_{\theta JL}$	45	ºC/W

Axial Leaded



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 @25ºC.
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.

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SDR1D thru SDR1N

ELECTRICAL CHARACTERISTICS [3/]

CHARACTERISTICS		SYMBOL	VALUE	UNIT
Instantaneous Forward Voltage Drop (I_F = 1Adc, 300- 500 µs Pulse, T_A = 25ºC)	SDR1D thru SDR1J SDR1K thru SDR1N	V_{F1}	1.70 1.90	Vdc
Instantaneous Forward Voltage Drop (I_F = 1Adc, 300- 500 µs Pulse, T_A = -55ºC)	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 = 25ºC)		I_{R1}	5	µA
Maximum Reverse Leakage Current (Rated V_R, 300 µs Pulse Minimum , T_A = 100ºC)		I_{R2}	500	µA
Junction Capacitance (V_R = 10Vdc, T_A = 25ºC , f = 1MHz)		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”	---