



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

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
 L **Package Type**
 — = Axial Leaded
 L **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)

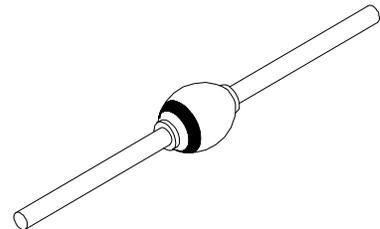
MAXIMUM RATINGS ^{3/}

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR1D	V_{RRM} V_{RWM} V_R	200	Volts
	SDR1G		400	
	SDR1J		600	
	SDR1K		800	
	SDR1M		1000	
	SDR1N		1200	
Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A = 25°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°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_{θJL}	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





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**SDR1D
 thru
 SDR1N**

ELECTRICAL CHARACTERISTICS ^{3/}

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

Axial Leaded Case Outline ^{5/}:

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