Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDR4G - SDR4N and SDR4GSMS – SDR4NSMS

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

SDR4 — — —

- **Screening**[2/] = None, TX = TX Level, TXV = TXV Level, S = S Level
- **Package** ___ = Axial, SMS = Surface Mount Square Tab
- **Voltage** G = 400 V, J = 600 V, K = 800 V, M = 1000 V, N = 1200 V

3 AMP
400 – 1200 Volts
50-80 nsec
ULTRA FAST RECTIFIER

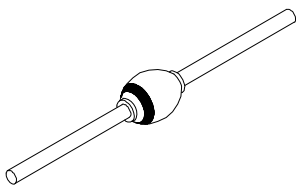
Features:

- **Ultra Fast Recovery: 50-80 nsec Max. @ 25°C**
  85-125 nsec Max. @ 100°C
- **Single Chip Construction**
- **PIV to 1200 Volts**
- **Low Reverse Leakage Current**
- **Hermetically Sealed**
- **For High Efficiency Applications**
- **Available in Axial Leaded & Surface Mount versions**
- **Metallurgically Bonded**
- **TX, TXV, and S-Level Screening Available**[2/]

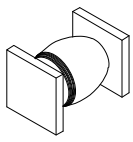
Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	**SDR4G**	V_{RRM}	400	**Volts**
	SDR4J		600	
	SDR4K	V_{RWM}	800	
	SDR4M		1000	
	SDR4N	V_R	1200	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T_A = 25ºC)		**Io**	3	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, Allow Junction to Reach Equilibrium Between Pulses, T_A = 25ºC)		I_{FSM}	75	**Amps**
Operating & Storage Temperature		**Top & Tstg**	-65 to +175	**ºC**
Maximum Thermal Resistance	Junction to Lead, L = 3/8 "	$R_{\theta JL}$	20	**ºC/W**
	Junction to End Tab	$R_{\theta JE}$	14	

Notes:
1/ For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.
2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

Axial Leaded



SMS (Square)

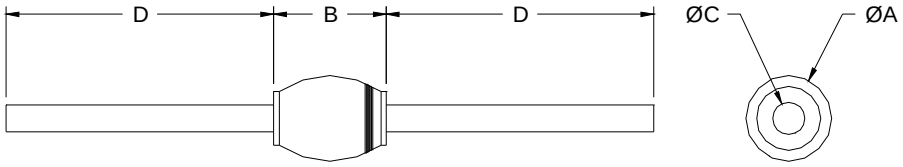


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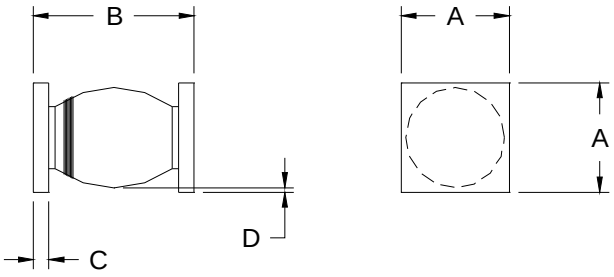
Electrical Characteristics	Part Type	Symbol	Max	Units
Instantaneous Forward Voltage Drop (I_F = 3 Adc, T_A = 25ºC, 300 µs pulse)	SDR2G – J SDR2K – N	V_F	1.9 2.1	**Vdc**
Instantaneous Forward Voltage Drop (I_F = 3 Adc, T_A = -55ºC, 300 µs pulse)	SDR2G – J SDR2K – N	V_F	2.1 2.3	**Vdc**
Reverse Leakage Current (Rated V_R, T_A = 25ºC, 300 µs pulse minimum)		I_R	5	**µA**
Reverse Leakage Current (Rated V_R, T_A = 100ºC, 300 µs pulse minimum)		I_R	0.5	**µA**
Junction Capacitance (V_R = 10 Vdc, T_A = 25ºC, f = 1MHz)		C_J	40	**pF**
Reverse Recovery Time (**I_F** = 500 mA, I_R = 1A, I_{RR} = 0.25A, T_A = 25ºC)	SDR2G – J SRS1K SRS1M SRS1N	t_{rr}	50 60 70 80	**nsec**

Case Outline: (Axial)



DIMENSIONS		
DIM	**MIN**	**MAX**
A	.120”	.180”
B	.130”	.230”
C	.047”	.053”
D	1.00”	---

Case Outline: Surface Mount (SMS)



DIMENSIONS		
DIM	**MIN**	**MAX**
A	0.172”	0.180”
B	0.180”	0.280”
C	0.022”	0.028”
D	0.002”	—

Dimensions prior to solder dipping