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

SDR6K and SDR6M

6.0 AMPS
800 – 1000 VOLTS
90 nsec ULTRA FAST RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR6 ___ ___ ___

- **Screening** [2/]
  - __ = Not Screened
  - TX = TX Level
  - TXV = TXV
  - S = S Level
- **Package Type**
  - __ = Axial Leaded
- **Family** K = 800V, M = 1000V

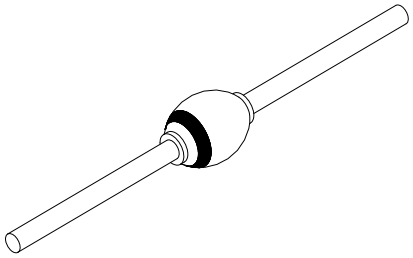
FEATURES:

- **Ultra Fast Recovery: 90 ns Max @ 25°C** [4/]
  115-120 ns Max @ 100°C [4/]
- **Single Chip Construction**
- **PIV to 1000 Volts**
- **Low Reverse Leakage Current**
- **Hermetically Sealed**
- **For High Efficiency Applications**
- **Metallurgically Bonded**
- **Replaces Larger DO-4 Rectifiers**
- **TX, TXV, and S-Level Screening Available**
- **Available in Surface Mount Versions**

MAXIMUM RATINGS [3/]

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR1K SDR1M	V_{RRM} V_{RWM} V_R	800 1000	Volts
Rectified Forward Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25°C)		I_O	6	Amp
Peak Surge Current (8.3 msec Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25°C)		I_{FSM}	150	Amps
Operating & Storage Temperature		T_{OP} and T_{STG}	-65 to +175	°C
Thermal Resistance, Junction to Lead, L = 3/8"		$R_{\theta JL}$	12	°C/W

Axial Leaded



NOTES:

1/ For Ordering Information, Price, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

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.

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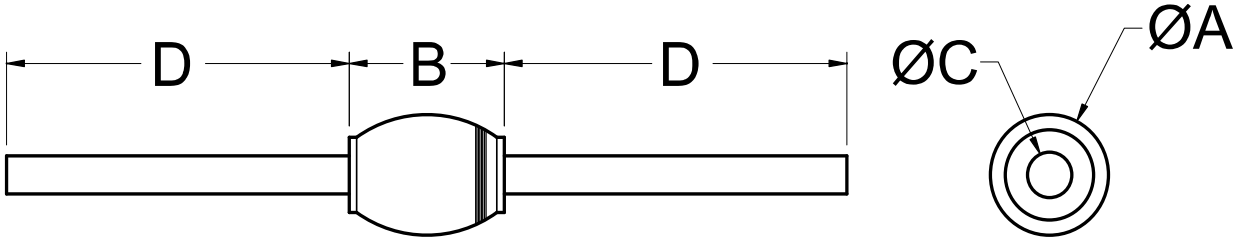
SDR6K and SDR6M

ELECTRICAL CHARACTERISTICS [3/]

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Instantaneous Forward Voltage Drop (I_F = 6Adc, 300 µs Pulse, T_A = 25°C)	V_{F1}	2.20	Vdc
Instantaneous Forward Voltage Drop (I_F = 6Adc, 300 µs Pulse, T_A = -55°C)	V_{F2}	2.10	Vdc
Maximum Reverse Leakage Current (Rated V_R, 300 µs Pulse Minimum , T_A = 25°C)	I_{R1}	10	µA
Maximum Reverse Leakage Current (Rated V_R, 300 µs Pulse Minimum , T_A = 100°C)	I_{R2}	1	mA
Junction Capacitance (VR = 10Vdc, T_A = 25°C , f = 1MHz)	C_J	80	pf
Maximum Reverse Recovery Time [4/]	t_{rr}	90	ns

Axial Leaded Case Outline [5/]:

DIMENSIONS		
DIM.	MIN.	MAX.
A	---	.200”
B	---	.270”
C	.055”	.063”
D	.400”	---



NOTES:

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2/ Screened to MIL-PRF-19500.
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.