



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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SDR6K and SDR6M

6.0 AMPS
800 — 1000 VOLTS
90 nsec ULTRA FAST RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR6 — — —

- L **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**

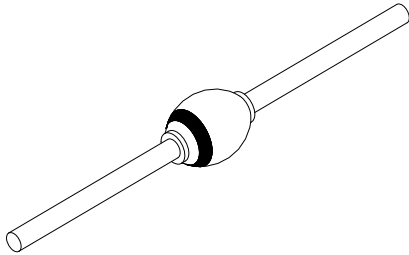
MAXIMUM RATINGS ^{3/}

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 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 I _o , 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 _{θJL}	12	°C/W

NOTES:

- 1/** For Ordering Information, Price, and Availability- Contact Factory.
- 2/** Screened to MIL-PRF-19500.
- 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.

Axial Leaded





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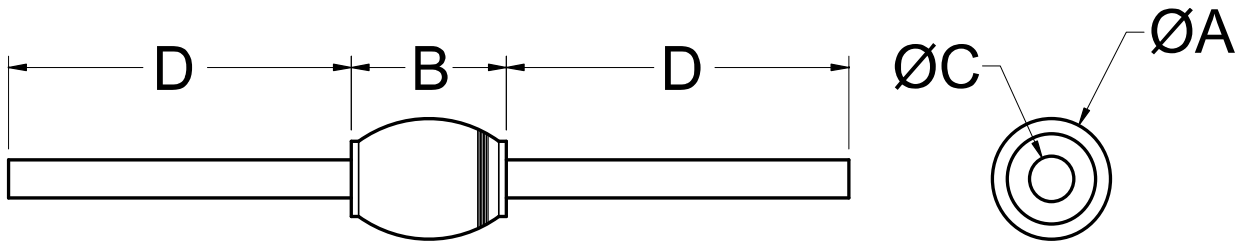
ELECTRICAL CHARACTERISTICS ^{3/}

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Instantaneous Forward Voltage Drop ($I_F = 6A_{dc}$, 300 μs Pulse, $T_A = 25^\circ C$)	V_{F1}	2.20	Vdc
Instantaneous Forward Voltage Drop ($I_F = 6A_{dc}$, 300 μs Pulse, $T_A = -55^\circ C$)	V_{F2}	2.10	Vdc
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum, $T_A = 25^\circ C$)	I_{R1}	10	μA
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum, $T_A = 100^\circ C$)	I_{R2}	1	mA
Junction Capacitance ($V_R = 10V_{dc}$, $T_A = 25^\circ C$, $f = 1MHz$)	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"	---



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- 2/ Screened to MIL-PRF-19500.
- 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.

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RU0017B

DOC