



lid 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

Designer's Data Sheet

Part Number/Ordering Information 1/

SDR6

L Screening 2/ = Not Screened

 $\overline{TX} = TX \text{ Level}$ TXV = TXV

S = S Level

Package Type = Axial Leaded

Family K = 800V

M = 1000V

6.0 AMPS 800 - 1000 VOLTS90 nsec ULTRA FAST RECTIFIER

FEATURES:

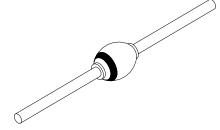
- Ultra Fast Recovery: 90 ns Max @ $25^{\circ}C^{\frac{4}{}}$ 115-120 ns Max @ 100° C $^{4/}$
- **Single Chip Construction**
- PIV to 1000 Volts
- Low Reverse Leakage Current
- **Hermetically Sealed**
- For High Efficiency Applications
- **Metallurgically Bonded**
- **Replaces Larger DO-4 Rectifiers**
- 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	$egin{array}{c} V_{RRM} \ V_{RWM} \ V_{R} \end{array}$	800 1000	Volts
Rectified Forward Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A = 25°C)	Io	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, $L = 3/8$ "	$R_{ heta JL}$	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.
- $\underline{4}$ / Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp, I_{RR} to .25 Amp.







SDR6K and SDR6M

14701 Firestone Blvd * La Mirada, Ca 90638 Phone: (562) 404-4474 * Fax: (562) 404-1773 ssdi@ssdi-power.com * www.ssdi-power.com

ELECTRICAL CHARACTERISTICS 3/					
CHARACTERISTICS	SYMBOL	VALUE	UNIT		
Instantaneous Forward Voltage Drop $(I_F = 6Adc, 300 \mu s \text{ Pulse}, T_A = 25^{\circ}\text{C})$	$ m V_{F1}$	2.20	Vdc		
Instantaneous Forward Voltage Drop $(I_F = 6Adc, 300 \mu s \text{ Pulse}, T_A = -55^{\circ}\text{C})$	$ m V_{F2}$	2.10	Vdc		
Maximum Reverse Leakage Current (Rated V_R , 300 μ s Pulse Minimum , T_A = 25°C)	I_{R1}	10	μΑ		
Maximum Reverse Leakage Current (Rated V_R , 300 μ s Pulse Minimum , T_A = 100°C)	I_{R2}	1	mA		
Junction Capacitance (VR = 10 Vdc, $T_A = 25$ °C, $f = 1$ MHz)	C_{J}	80	pf		
Maximum Reverse Recovery Time 4/	t _{rr}	90	ns		

		DIMENSIONS		
Axial Leaded Case Outline 5/:	DIM.	MIN.	MAX.	
	A		.200"	
	В		.270"	
	C	.055"	.063"	
	D	.400"		
D B	D —	ØC (ØA	

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.
- $\underline{4}$ / 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.