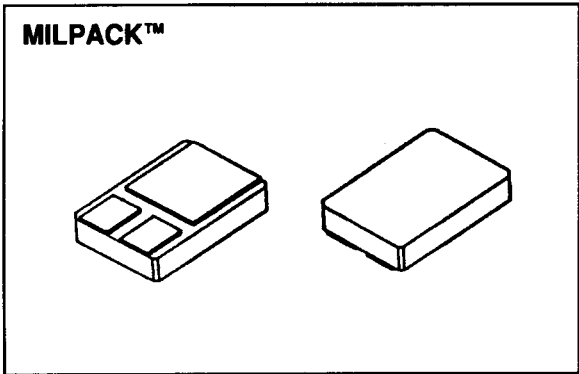


**SDR680  
 thru  
 SDR682**

**80 AMP  
 100-200 VOLTS  
 35 nsec  
 HYPER FAST  
 RECTIFIER**



**Designer's Data Sheet**

- FEATURES:**
- Hyper Fast Recovery: 35 nsec Maximum
  - High Surge Rating
  - Low Reverse Leakage Current
  - Low Junction Capacitance
  - Hermetically Sealed Surface Mount Power Package
  - Gold Eutectic Die Attach available
  - Ultrasonic Aluminum Wire Bonds
  
  - TX, TXV and Space Level Screening Available

**MAXIMUM RATINGS**

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage, note 1	VRRM	100	Volts
SDR680	VRWM	150	
SDR681	VR	200	
SDR682			
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C) note 2	IO	80	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C) note 2	IFSM	1000	Amps
Operating and storage temperature	Top & Tstg	-65 to +200	°C
Maximum Thermal Resistance Junction to Case, note 2	RθJC	1.0	°C/W

Note 1 Higher voltage class available  
 Note 2 Both legs tied together

# SDR680 thru SDR682

PRELIMINARY



SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

## ELECTRICAL CHARACTERISTICS

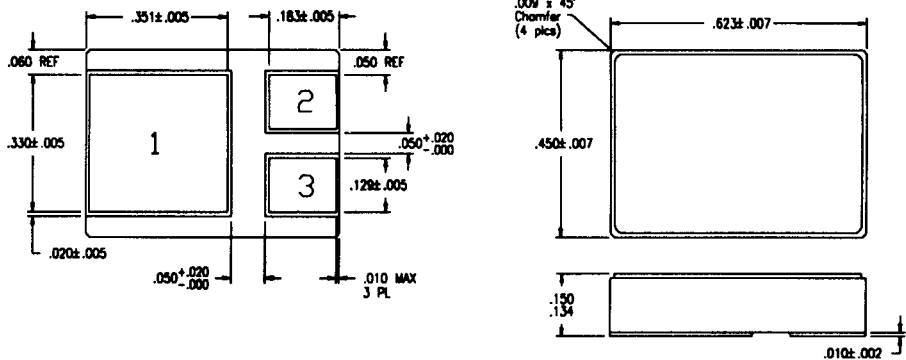
CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
<b>Instantaneous Forward Voltage Drop</b> (IF = 40 Adc, TA=25°C, 300µs Pulse) note 1 (IF = 80 Adc, TA=25°C, 300µs Pulse) note 1	<b>VF</b>	1.0 1.2	<b>Vdc</b>
<b>Instantaneous Forward Voltage Drop</b> (IF = 40 Adc, TA= 100°C, 300µs Pulse) note 1 (IF = 40 Adc, TA= - 55°C, 300µs Pulse) note 1	<b>VF</b>	0.9 1.1	<b>Vdc</b>
<b>Reverse Leakage Current</b> (Rated VR, TA=25°C, 300µs pulse minimum)	<b>IR</b>	40	<b>µA</b>
<b>Reverse Leakage Current</b> (Rated VR, TA=100°C, 300µs pulse minimum)	<b>IR</b>	4	<b>mA</b>
<b>Junction Capacitance</b> (VR = 10 Vdc, TA=25°C, f= 1 MHz )	<b>CJ</b>	600	<b>pf</b>
<b>Reverse Recovery Time</b> (IF=1 A, IR=1 A, IRR= 100mA, TA=25°C)	<b>t<sub>rr</sub></b>	35	<b>nsec</b>

### CASE OUTLINE: MILPACK

PIN 1: CATHODE  
PIN 2: ANODE  
PIN 3: ANODE

**Note 1:**

For best results connect pin 2 & 3 together in application.



### TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified

