



PRELIMINARY

SOLID STATE DEVICES, INC

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

**SDR4512M**

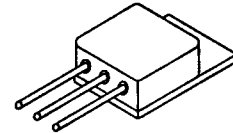
**45 AMP  
1200 VOLTS  
80nsec  
RECTIFIER**

## Designer's Data Sheet

### FEATURES:

- High Voltage: 1200 Volts Max.
- Ultra Fast Recovery: 80 nsec Maximum
- Higher Surge Ratings available
- Hermetically Sealed
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
  
- TX, TXV and Space Level Screening Available

TO-254



### MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage  <b>SDR4512M</b>	VRRM VRWM VR	1200	Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	Io	45	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C)	IFSM	400	Amps
Operating and storage temperature	Top & Tstg	-65 to +200	°C
Maximum Thermal Resistance Junction to Case	RθJC	0.8	°C/W

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

DATA SHEET#: RU0151 A

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**ELECTRICAL CHARACTERISTICS**

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
<b>Instantaneous Forward Voltage Drop</b> (IF = 25 Adc, TA=25°C, 300µs Pulse) (IF = 45 Adc, TA=25°C, 300µs Pulse)	<b>VF</b>	1.7 2.0	<b>Vdc</b>
<b>Instantaneous Forward Voltage Drop</b> (IF = 25 Adc, TA= -55°C, 300µs Pulse) (IF = 25 Adc, TA= 100°C, 300µs Pulse)	<b>VF</b>	1.8 1.6	<b>Vdc</b>
<b>Reverse Leakage Current</b> (Rated VR, TA=25°C, 300µs pulse minimum)	<b>IR</b>	50	<b>µA</b>
<b>Reverse Leakage Current</b> (Rated VR, TA=100°C, 300µs pulse minimum)	<b>IR</b>	5	<b>mA</b>
<b>Junction Capacitance</b> (VR = 10 Vdc, TA=25°C, f= 1 MHz )	<b>CJ</b>	100	<b>pf</b>
<b>Reverse Recovery Time</b> (IF=500mA, IR=1 A, IRR=250mA, TA=25°C)	<b>trr</b>	80	<b>nsec</b>

**CASE OUTLINE: TO-254**

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

