



PRELIMINARY

SOLID STATE DEVICES, INC

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

**SDR4G  
thru  
SDR4N**

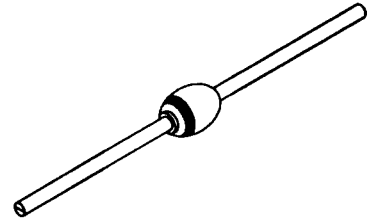
**3 AMP  
400-1200 VOLTS  
50-80 nsec  
ULTRA FAST  
RECTIFIER**

## Designer's Data Sheet

### FEATURES:

- Ultra Fast Recovery: 50-80 nsec Max. @ 25°C  
85-125 nsec Max. @ 100°C
- Single Chip Construction
- PIV to 1200 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- For High Efficiency Applications
- Available in Surface Mount versions
- Metallurgically Bonded
- TX, TXV and Space Level Screening

AXIAL



### MAXIMUM RATINGS

| RATING   | SYMBOL                     | VALUE                             | UNIT  |
|--|----------------------------|-----------------------------------|-------|
| Peak Repetitive Reverse and DC Blocking Voltage<br><br>SDR4G<br>SDR4J<br>SDR4K<br>SDR4M<br>SDR4N                                     | VRRM<br><br>VRWM<br><br>VR | 400<br>600<br>800<br>1000<br>1200 | Volts |
| Average Rectified Forward Current<br>(Resistive Load, 60Hz, Sine Wave, TA=25°C)  | IO                         | 3                                 | Amps  |
| Peak Surge Current<br>(8.3 ms Pulse, Half Sine Wave Superimposed on IO, allow junction to reach equilibrium between pulses, TA=25°C) | IFSM                       | 75                                | Amps  |
| Operating and storage temperature  | Top & Tstg                 | -65 to +175                       | °C    |
| Maximum Thermal Resistance<br>Junction to Leads, L=3/8"  | RθJL                       | 20                                | °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 #: RU0015 A

RMD

# SDR4G thru SDR4N

PRELIMINARY



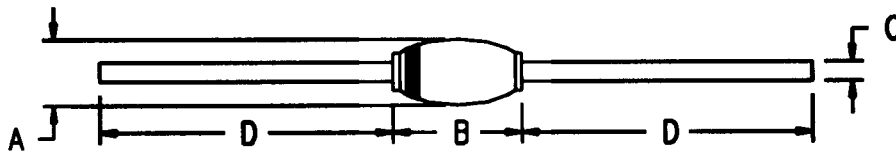
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## ELECTRICAL CHARACTERISTICS

| CHARACTERISTICS   |          | SYMBOL | MAXIMUM | UNIT |
|---|----------|--------|---------|------|
| Instantaneous Forward Voltage Drop<br>(IF = 3 Adc, TA=25°C, 300µs Pulse)  | SDR4G-J  | VF     | 1.9     | Vdc  |
|   | SDR4K-N  |        | 2.1     |      |
| Instantaneous Forward Voltage Drop<br>(IF = 3 Adc, TA=-55°C, 300µs Pulse) | SDR4G-J  | VF     | 2.1     | Vdc  |
|   | SDR4K-N  |        | 2.3     |      |
| Reverse Leakage Current<br>(Rated VR, TA=25°C, 300µs pulse minimum)       |          | IR     | 5       | µA   |
| Reverse Leakage Current<br>(Rated VR, TA=100°C, 300µs pulse minimum)      |          | IR     | 0.5     | mA   |
| Junction Capacitance<br>(VR = 10 Vdc, TA=25°C, f= 1 MHz)                  |          | CJ     | 40      | pf   |
| Reverse Recovery Time<br>(IF =500ma, IR = 1A, IRR=250mA,<br>TA=25°C)      | SDR4G-4J | trr    | 50      | nsec |
|   | SDR4K    |        | 60      |      |
|   | SDR4M    |        | 70      |      |
|   | SDR4N    |        | 80      |      |

## CASE OUTLINE:



## DIMENSIONS

| DIM | MIN.  | MAX.  |
|-----|-------|-------|
| A   | .120" | .180" |
| B   | .130" | .230" |
| C   | .047" | .053" |
| D   | 1.00" | ---   |

## TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified

