



PRELIMINARY

SOLID STATE DEVICES, INC

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

**SDR405
thru
SDR415**

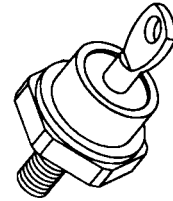
**50 AMP
50-150 VOLTS
50 nsec
ULTRA FAST
RECTIFIER**

Designer's Data Sheet

FEATURES:

- Ultra Fast Recovery: 50 nsec Maximum
- Radiation Tolerant
- Very Low Forward Voltage Drop
- Hermetically Sealed
- Single Chip Construction
- 175°C Operating Temperature
- For High Efficiency Applications
- TX, TXV and Space Level Screening Available

DO-5



MAXIMUM RATINGS

| RATING | SYMBOL | VALUE | UNIT | | |
|--|---|-------------------------------|-------|-------------|------|
| Peak Repetitive Reverse and DC Blocking Voltage | SDR405 SDR407 SDR410 SDR412 SDR415 | VRRM VRWM VR | Volts | | |
| | | 50 70 100 125 150 | | | |
| | Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C) | IO | | 50 | Amps |
| | Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C) | IFSM | | 450 | Amps |
| | Operating and storage temperature | Top & Tstg | | -65 to +175 | °C |
| Maximum Thermal Resistance Junction to Case | RθJC | 1.0 | °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 #: RU0039 A

RMD

SDR405 thru SDR415

PRELIMINARY



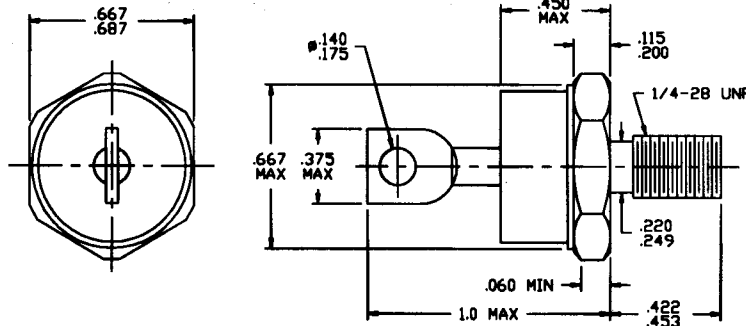
SOLID STATE DEVICES, INC

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

ELECTRICAL CHARACTERISTICS

| CHARACTERISTICS | SYMBOL | MAXIMUM | UNIT |
|--|--------|---------|---------------|
| Instantaneous Forward Voltage Drop ($I_F = 50 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse) | VF | 0.90 | Vdc |
| Instantaneous Forward Voltage Drop ($I_F = 50 \text{ Adc}$, $T_A = -55^\circ\text{C}$, 300 μs Pulse) | VF | 1.0 | Vdc |
| Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum) | IR | 250 | μA |
| Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse minimum) | IR | 20 | mA |
| Junction Capacitance ($V_R = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$) | CJ | 400 | pf |
| Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$, $T_A = 25^\circ\text{C}$) | trr | 50 | nsec |

CASE OUTLINE: DO-5



TYPICAL OPERATING CURVES

$T_A = 25^\circ\text{C}$ Unless otherwise specified

