

**SDR900  
 thru  
 SDR905**

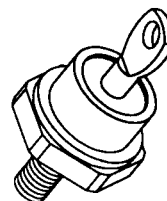
## Designer's Data Sheet

### FEATURES:

- Ultra Fast Recovery: 50 nsec Maximum
- Low Reverse Leakage
- Hermetically Sealed
- High Surge Current
- Single Chip Construction
- Available in isolated package
- For High Efficiency Applications
- TX, TXV and Space Level Screening Available

**30 AMP  
 50-500 VOLTS  
 50 nsec  
 ULTRA FAST  
 RECTIFIER**

DO-5



### MAXIMUM RATINGS

| RATING                                                                          | SYMBOL     | VALUE       | UNIT  |
|---------------------------------------------------------------------------------|------------|-------------|-------|
| Peak Repetitive Reverse<br>and DC Blocking Voltage                              |            |             |       |
| SDR900                                                                          | VRRM       | 50          | Volts |
| SDR901                                                                          |            | 100         |       |
| SDR902                                                                          | VRWM       | 200         |       |
| SDR903                                                                          |            | 300         |       |
| SDR904                                                                          | VR         | 400         |       |
| SDR905                                                                          |            | 500         |       |
| Average Rectified Forward Current<br>(Resistive Load, 60Hz, Sine Wave, TA=25°C) | IO         | 30          | Amps  |
| Peak Surge Current<br>(8.3 ms Pulse, Half Sine Wave, TA=25°C)                   | IFSM       | 350         | Amps  |
| Operating and storage temperature                                               | Top & Tstg | -65 to +175 | °C    |
| Maximum Thermal Resistance<br>Junction to Case                                  | RθJC       | 1.0         | °C/W  |

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

DATA SHEET #: RU0025 A

RMD

# SDR900 thru SDR905

PRELIMINARY



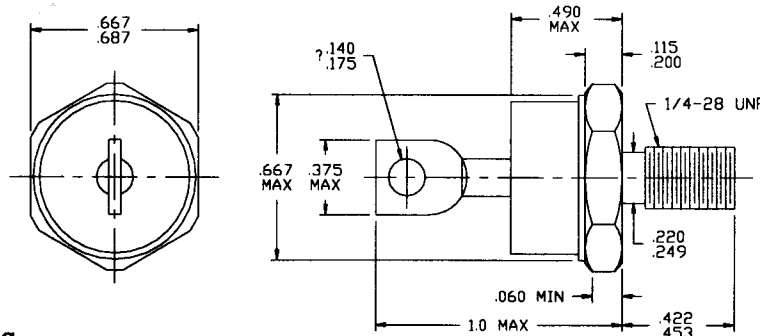
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## ELECTRICAL CHARACTERISTICS

| CHARACTERISTICS                                                                                                                   | SYMBOL     | MAXIMUM | UNIT          |
|-----------------------------------------------------------------------------------------------------------------------------------|------------|---------|---------------|
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 30 \text{ Adc}$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)       | <b>VF</b>  | 1.45    | <b>Vdc</b>    |
| <b>Instantaneous Forward Voltage Drop</b><br>( $I_F = 30 \text{ Adc}$ , $T_A = -55^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)      | <b>VF</b>  | 1.6     | <b>Vdc</b>    |
| <b>Reverse Leakage Current</b><br>(Rated $V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)                      | <b>IR</b>  | 50      | $\mu\text{A}$ |
| <b>Reverse Leakage Current</b><br>(Rated $V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)                     | <b>IR</b>  | 10      | <b>mA</b>     |
| <b>Junction Capacitance</b><br>( $V_R = 10 \text{ Vdc}$ , $T_A = 25^\circ\text{C}$ , $f = 1 \text{ MHz}$ )                        | <b>CJ</b>  | 250     | <b>pf</b>     |
| <b>Reverse Recovery Time</b><br>( $I_F = 500\text{mA}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{mA}$ , $T_A = 25^\circ\text{C}$ ) | <b>trr</b> | 50      | <b>nsec</b>   |

## CASE OUTLINE: DO-5



Dimensions prior to solder dipping.

## TYPICAL OPERATING CURVES

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

