



PRELIMINARY

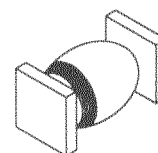
SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424SPD805SMS  
thru  
SPD830SMS

## Designer's Data Sheet

## FEATURES:

- Hyper Fast Recovery: 40 nsec Maximum
- PIV to 300 Volts
- Low Forward Voltage Drop
- Square Tab Surface Mount Package
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- Replaces 1N5811 types
- TX, TXV and Space Level Screening available

8 AMP  
50-300 VOLTS  
40 nsec  
HYPER FAST  
RECTIFIERSURFACE MOUNT  
SQUARE TAB

## MAXIMUM RATINGS

| RATING                                                                                                                                  | SYMBOL                     | VALUE                   | UNIT  |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------|-------|
| Peak Repetitive Reverse<br>and DC Blocking Voltage<br><br>SPD805SMS<br>SPD810SMS<br>SPD820SMS<br>SPD830SMS                              | VRRM<br><br>VRWM<br><br>VR | 50<br>100<br>200<br>300 | Volts |
| Average Rectified Forward Current<br>(Resistive Load, 60Hz, Sine Wave, TA=25°C)                                                         | IO                         | 8                       | Amps  |
| Peak Surge Current<br>(8.3 ms Pulse, Half Sine Wave Superimposed on IO, allow<br>junction to reach equilibrium between pulses, TA=25°C) | IFSM                       | 125                     | Amps  |
| Operating and storage temperature                                                                                                       | Top & Tstg                 | -65 to +175             | °C    |
| Maximum Thermal Resistance<br>Junction to End Tab                                                                                       | RθJE                       | 12                      | °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#: RH0093 A

RMD

# SPD805SMS thru SPD830SMS

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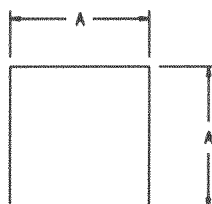
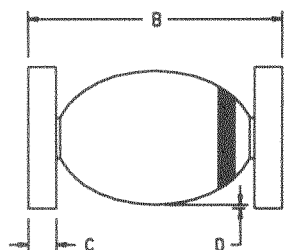
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## ELECTRICAL CHARACTERISTICS

| CHARACTERISTICS                                                            | SYMBOL | MAXIMUM | UNIT |
|----------------------------------------------------------------------------|--------|---------|------|
| Instantaneous Forward Voltage Drop<br>(IF = 8 Adc, TA=25°C, 300μs Pulse)   | VF     | 0.98    | Vdc  |
| Instantaneous Forward Voltage Drop<br>(IF =8 Adc, TA= - 55°C, 300μs Pulse) | VF     | 1.08    | Vdc  |
| Reverse Leakage Current<br>(Rated VR, TA=25°C, 300μs pulse minimum)        | IR     | 20      | μA   |
| Reverse Leakage Current<br>(Rated VR, TA=100°C, 300μs pulse minimum)       | IR     | 1       | mA   |
| Junction Capacitance<br>(VR = 10 Vdc, TA=25°C, f= 1 MHz )                  | CJ     | 100     | pf   |
| Reverse Recovery Time<br>(IF=500mA, IR=1 A, IRR=250mA, TA=25°C)            | trr    | 40      | nsec |

## CASE OUTLINE:



| DIMENSIONS |       |       |
|------------|-------|-------|
| DIM        | MIN.  | MAX.  |
| A          | .172" | .180" |
| B          | .220" | .290" |
| C          | .020" | .035" |
| D          | .002" | —     |

## TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified

