Designer's Data Sheet

Part Number/Ordering Information 1

SPD — — —

L Screening 2

_ = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Package Type

SMS = Surface Mount Square Tab

Voltage/Family

805 = 50V

810 = 100 V

820 = 200 V

830 = 300 V

SPD805SMS thru SPD830SMS

8 AMP

50-300 VOLTS

40 nsec

Hyper Fast Rectifier

FEATURES:

• Hyper Fast Recovery: 40 nsec maximum

• PIV to 300 Volts

• Hermetically Sealed

• Void Free Construction

• For High Efficiency Applications

• Low Forward Voltage Drop

• Square Tab Surface Mount Package

• Replaces 1N5811 types

• TX, TXV, and Space Level Screening Available 2

MAXIMUM RATINGS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>V_RRM</td>
<td>50</td>
<td>Volts</td>
</tr>
<tr>
<td>V_RWM</td>
<td>100</td>
<td>Volts</td>
</tr>
<tr>
<td>V_R</td>
<td>200</td>
<td>Volts</td>
</tr>
<tr>
<td>VR</td>
<td>300</td>
<td>Volts</td>
</tr>
</tbody>
</table>

NOTES:

1/ For Ordering Information, Price, and Availability - Contact Factory.

2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

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

DATA SHEET #: RH0093C

Square Tab Surface Mount (SMS)
### ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{F1}$</td>
<td>1.00</td>
<td>Vdc</td>
</tr>
<tr>
<td>$V_{F2}$</td>
<td>1.10</td>
<td>Vdc</td>
</tr>
</tbody>
</table>

- **Instantaneous Forward Voltage Drop**
  - ($I_F = 8$ Adc, $T_A = 25^\circ C$, 300Ms pulse)
- **Instantaneous Forward Voltage Drop**
  - ($I_F = 8$ Adc, $T_A = -55^\circ C$, 300Ms pulse)
- **Reverse Leakage Current**
  - ($I_R$ = Rated $V_R$, 300Ms pulse minimum)
  - $I_{R1}$: $T_A = 25^\circ C$, $I_{R2}$: $T_A = 100^\circ C$
- **Reverse Recovery Time**
  - ($I_F = 500$ mA, $I_R = 1$ A, $I_{RR} = 250$ mA, $T_A = 25^\circ C$)
- **Junction Capacitance**
  - ($V_R = 10$ $V_{DC}$, $T_A = 25^\circ C$, $f = 1$ MHz)

### Case Outline: (SMS)

<table>
<thead>
<tr>
<th>DIM</th>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.172&quot;</td>
<td>0.180&quot;</td>
</tr>
<tr>
<td>B</td>
<td>0.220&quot;</td>
<td>0.290&quot;</td>
</tr>
<tr>
<td>C</td>
<td>0.020&quot;</td>
<td>0.035&quot;</td>
</tr>
<tr>
<td>D</td>
<td>0.002&quot;</td>
<td>---</td>
</tr>
</tbody>
</table>

Note: Dimensions prior to soldering.

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