SF11 - SF19

PRV : 50 - 1000 Volts
Io : 1.0 Ampere

FEATURES :
* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Super fast recovery time

MECHANICAL DATA :
* Case : DO-41 Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.34 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Rating at 25 ºC ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

<table>
<thead>
<tr>
<th>RATING</th>
<th>SYMBOL</th>
<th>SF11</th>
<th>SF12</th>
<th>SF13</th>
<th>SF14</th>
<th>SF15</th>
<th>SF16</th>
<th>SF17</th>
<th>SF18</th>
<th>SF19</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Recurrent Peak Reverse Voltage</td>
<td>VRRM</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
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<tr>
<td>Maximum RMS Voltage</td>
<td>VRMS</td>
<td>35</td>
<td>70</td>
<td>105</td>
<td>140</td>
<td>210</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
<td>Volts</td>
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<tr>
<td>Maximum DC Blocking Voltage</td>
<td>VDC</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum Average Forward Current (0.375&quot;(9.5mm) Lead Length, Ta = 55 ºC)</td>
<td>IF(AV)</td>
<td>1.0</td>
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<td>Amps</td>
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<tr>
<td>Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)</td>
<td>IFSM</td>
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<td>30</td>
<td>Amps</td>
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<tr>
<td>Maximum Peak Forward Voltage at IF = 1.0 A.</td>
<td>VF</td>
<td>0.95</td>
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<td></td>
<td>Volts</td>
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<tr>
<td>Maximum DC Reverse Current at Rated DC Blocking Voltage</td>
<td>IR</td>
<td>5.0</td>
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<td></td>
<td></td>
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<td>µA</td>
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<tr>
<td>Maximum Reverse Recovery Time (Note 1)</td>
<td>Trr</td>
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<td></td>
<td></td>
<td></td>
<td>ns</td>
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<tr>
<td>Typical Junction Capacitance (Note 2)</td>
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<td></td>
<td>pf</td>
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<td>Junction Temperature Range</td>
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<td>Storage Temperature Range</td>
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<td>ºC</td>
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</table>

Notes :
(1) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
(2) Measured at 1.0 MHz and applied reverse voltage of 40 VDC.

UPDATE : MARCH 8, 2002
RATING AND CHARACTERISTIC CURVES (SF11 - SF19)

FIG. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

NOTES: 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

FIG. 2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

Pulse Width = 300 µs
2% Duty Cycle

TJ = 25 °C

TJ = 100 °C