AK03 - AK04

**PRV :** 30 - 40 Volts

**Io :** 1.0 Amperes

**FEATURES :**
* High current capability
* High surge current capability
* High reliability
* High efficiency
* Low power loss
* Low forward voltage drop
* Low cost
* Pb / RoHS Free

**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 : 0.339 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**
Rating at 25 °C 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>AK03</th>
<th>AK04</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Recurrent Peak Reverse Voltage</td>
<td>V_{RRM}</td>
<td>30</td>
<td>40</td>
<td>V</td>
</tr>
<tr>
<td>Maximum Peak Reverse Surge Voltage</td>
<td>V_{RSM}</td>
<td>35</td>
<td>45</td>
<td>V</td>
</tr>
<tr>
<td>Maximum Average Forward Current</td>
<td>I_{F(AV)}</td>
<td>1.0</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Maximum Peak Forward Surge Current</td>
<td>I_{FISM}</td>
<td>25</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>( 50 Hz, Half-cycle, Sine wave, Single Shot )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Forward Voltage at Ir = 1A</td>
<td>V_f</td>
<td>0.55</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Maximum Reverse Current at V_R = V_{RRM} T_a = 25 °C</td>
<td>I_{R(H)}</td>
<td>1.0</td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Maximum Reverse Current at V_R = V_{RRM} T_J = 100 °C</td>
<td>I_{R(H)}</td>
<td>50</td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Junction Temperature Range</td>
<td>T_J</td>
<td>- 40 to + 125</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>T_{STG}</td>
<td>- 40 to + 125</td>
<td>°C</td>
<td></td>
</tr>
</tbody>
</table>
RATING AND CHARACTERISTIC CURVES (AK03 - AK04)

FIG.1 - FORWARD CURRENT DERATING CURVE

FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

FIG.3 - TYPICAL FORWARD CHARACTERISTICS

FIG.4 - TYPICAL REVERSE CHARACTERISTICS

AMBIENT TEMPERATURE, (°C)

NUMBER OF CYCLES AT 50Hz

PEAK FORWARD SURGE CURRENT, AMPERES

PERCENT OF RATED REVERSE VOLTAGE, (%)

FORWARD CURRENT, AMPERES

FORWARD VOLTAGE, VOLTS

Ta = 27 °C

TJ = 100 °C

TJ = 25 °C