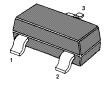
## Silicon Epitaxial Planar Switching Diode

#### **Features**

- Small package
- · Low forward voltage
- Fast reverse recovery time
- · Small total capacitance

# 3



Marking Code: **A1** TO-236 Plastic Package

#### **Applications**

• Ultra high speed switching application

### Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

| Parameter                               |  | Symbol           | Value         | Unit       |
|---|--|------------------|---------------|------------|
| Peak Repetitive Reverse Voltage         |  | $V_{RRM}$        | 85            | V          |
| Continuous Reverse Voltage              |  | $V_R$            | 75            | V          |
| ` ,                                     | gle Diode Loaded<br>uble Diode Loaded        | I <sub>F</sub>   | 215<br>125    | mA         |
| Repetitive Peak Forward Current         |  | I <sub>FRM</sub> | 450           | mA         |
| Non-repetitive Peak Forward Surge Curre | ent at t = 1 s<br>at t = 1 ms<br>at t = 1 µs | I <sub>FSM</sub> | 0.5<br>1<br>4 | А          |
| Power Dissipation                       |  | P <sub>tot</sub> | 350           | mW         |
| Operating Junction Temperature          |  | Tj               | 150           | °C         |
| Storage Temperature Range               |  | $T_{stg}$        | - 65 to + 150 | $^{\circ}$ |

#### Characteristics at $T_a = 25$ °C

| Parameter   | Symbol   | Max.                    | Unit                 |
|---|--|-------------------------|----------------------|
| Forward Voltage at $I_F = 1$ mA at $I_F = 10$ mA at $I_F = 50$ mA at $I_F = 150$ mA                                       | V <sub>F</sub><br>V <sub>F</sub><br>V <sub>F</sub> | 715<br>855<br>1<br>1.25 | mV<br>mV<br>V        |
| Reverse Current<br>at $V_R$ = 25 V<br>at $V_R$ = 75 V<br>at $V_R$ = 25 V, $T_J$ = 150°C<br>at $V_R$ = 75 V, $T_J$ = 150°C | I <sub>R</sub><br>I <sub>R</sub><br>I <sub>R</sub> | 30<br>1<br>30<br>50     | nΑ<br>μΑ<br>μΑ<br>μΑ |
| Diode Capacitance at $V_R = 0$ , $f = 1$ MHz  | C <sub>d</sub>                                     | 2                       | pF                   |
| Reverse Recovery Time at $I_F$ = 10 mA, $V_R$ = 6 V, $I_{rr}$ = 1 mA, $R_L$ = 100 $\Omega$                                | t <sub>rr</sub>                                    | 4                       | ns                   |

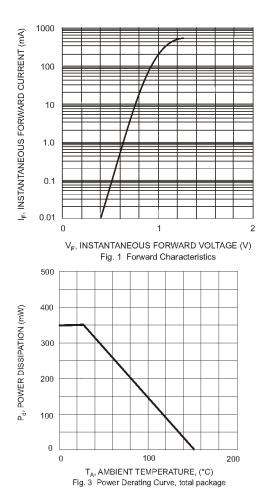


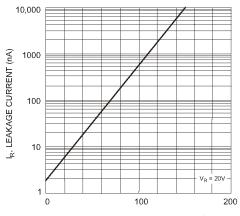












 $\label{eq:total_total_total} \textbf{T}_j, \textbf{JUNCTION TEMPERATURE (°C)} \\ \textbf{Fig. 2 Leakage Current vs Junction Temperature}$ 











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