

**SMALL SIGNAL DIODE**

**FEATURES**

- \* Silicon epitaxial planar diode
- \* Fast switching
- \* Surface mounting device
- \* "A7" Device marking

**MECHANICAL DATA**

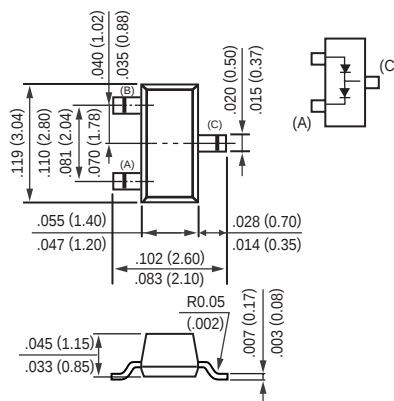
- \* Epoxy : Device has UL flammability classification 94V-0
- \* Weight : apporx. 0.008g

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.



**SOT-23**



**MAXIMUM RATINGS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

| RATINGS                                                            | SYMBOL    | BAV99       | UNITS            |
|--------------------------------------------------------------------|-----------|-------------|------------------|
| Repetitive Peak Reverse Voltage                                    | $V_{RRM}$ | 70          | Volts            |
| Forward Continuous Current at $T_A = 25^\circ\text{C}$             | $I_F$     | 215         | mA               |
| Repetitive Peak Forward Current at $T_A = 25^\circ\text{C}$        | $I_{FRM}$ | 450         | mA               |
| Surge Forward Current at $t_p < 1$ ms, at $T_A = 25^\circ\text{C}$ | $I_{FSM}$ | 1000        | mA               |
| Total Power Dissipation                                            | $P_D$     | 250         | mW               |
| Junction Temperature                                               | $T_J$     | 150         | $^\circ\text{C}$ |
| Storage Temperature Range                                          | $T_{STG}$ | -65 to +150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS           | SYMBOL          | Value | Unit | Testing Condition                      |
|---------------------------|-----------------|-------|------|----------------------------------------|
| Reverse Breakdown Voltage | V(BR)R          | 70    | V    | Ir=100uA                               |
| Forward Voltage           | VF(1)           | 715   | mV   | If=1mA                                 |
|                           | VF(2)           | 855   | mV   | If=10mA                                |
|                           | VF(3)           | 1000  | mV   | IF=50mA                                |
|                           | VF(4)           | 1250  | mV   | If=150mA                               |
| Reverse Current           | I <sub>R</sub>  | 2.5   | uA   | Vr=70V                                 |
| Total Capacitance         | C <sub>T</sub>  | 1.5   | pF   | Vr=0V,F=1MHZ                           |
| Reverse Recovery Time     | T <sub>rr</sub> | 6     | nS   | If=10mA,RL=100 ohm, measured at ir=1mA |

CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT  
& FORWARD VOLTAGE

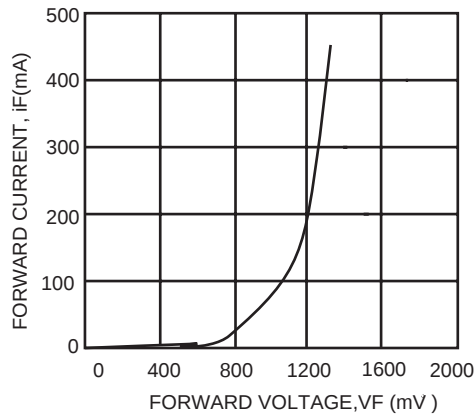


FIG. 2 - DIODE CAPACITANCE

