

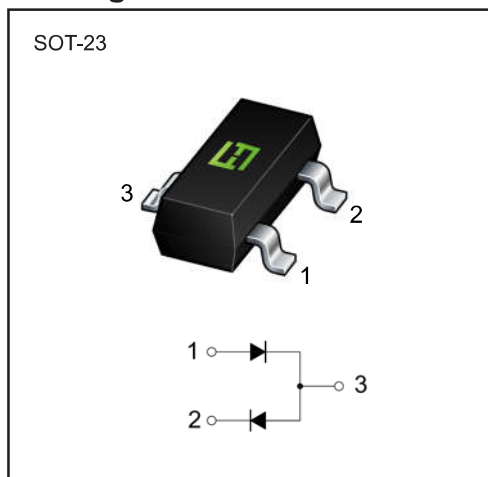
### Features

- Ideal for surface mounted application.
- Fast Switching Speed.
- For General Purpose Switching Applications.
- Epitaxial Planar Diode.
- Lead-free parts meet RoHS requirements.

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any

### Package



### Maximum Ratings @Ta=25°C

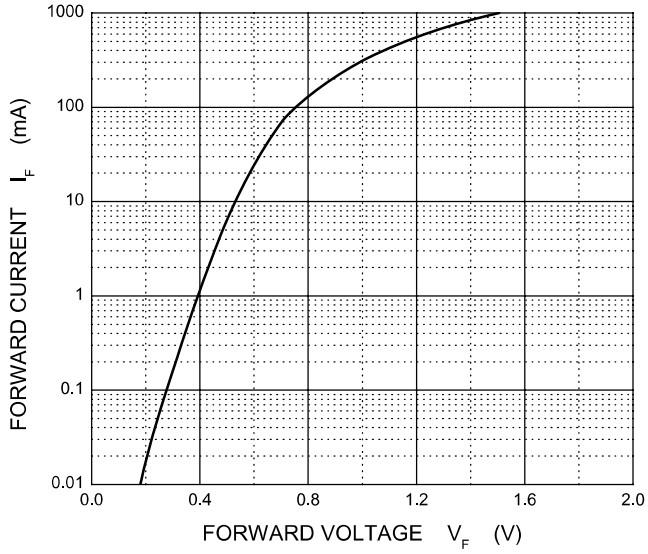
Parameter	Symbol	Limit	Unit
Repetitive peak reverse voltage	$V_{RRM}$	600	V
DC blocking voltage	$V_{DC}$		
Average rectified output current	$I_{F(AV)}$	500	mA
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	8.0	A
Junction temperature	$T_J$	-55~+150	°C
Storage temperature range	$T_{STG}$	-55~+150	°C

### ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

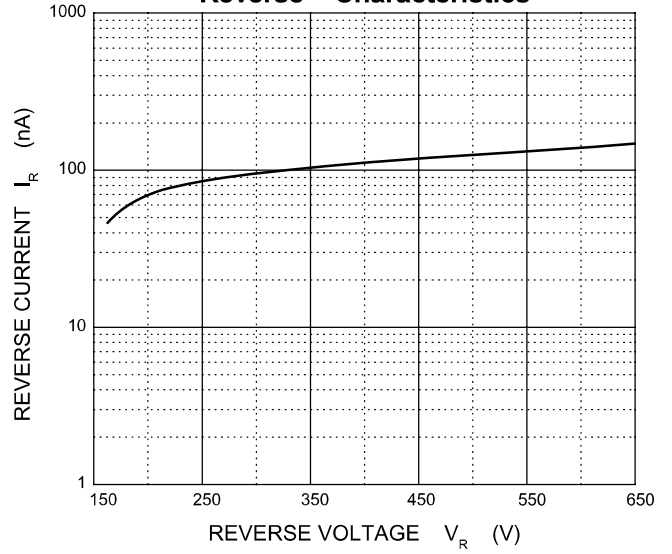
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu A$	600			V
Reverse voltage leakage current	$I_R$	$V_R=600V$			10	$\mu A$
Forward voltage	$V_F$	$I_F=300mA$			1.3	V
Diode capacitance	$C_T$	$V_R=0V, f=1MHz$		5		pF
Reveres recovery time	$t_{rr}$	$I_F=I_R=10mA, I_{tr}=0.1 \times I_R$			80	ns

## Rating and characteristic curves

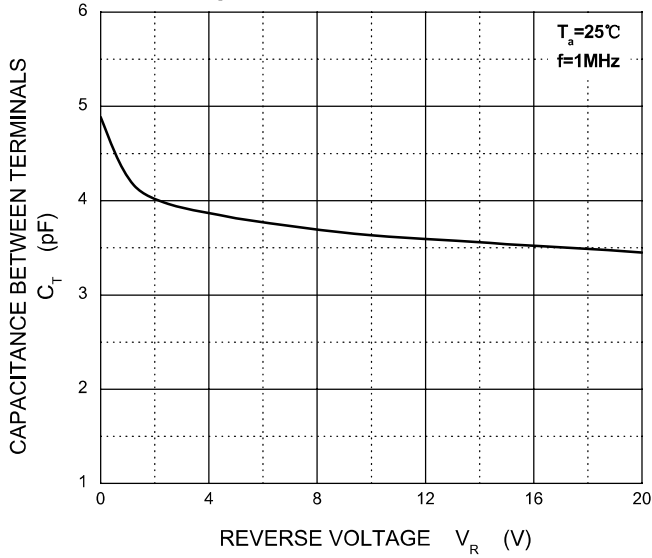
**Forward Characteristics**



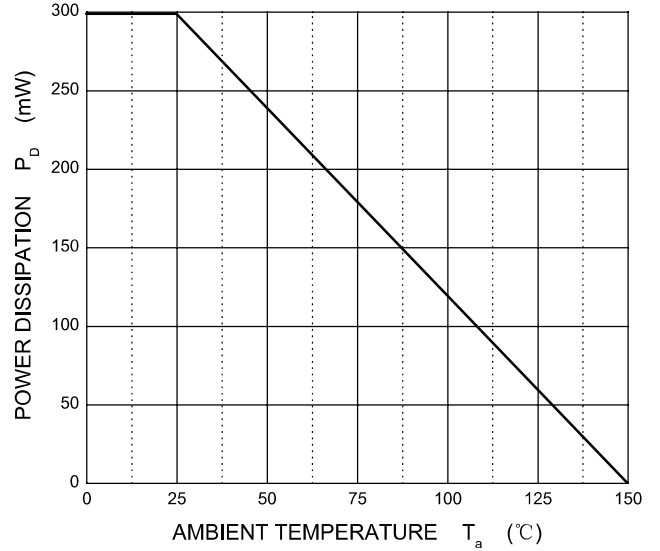
**Reverse Characteristics**



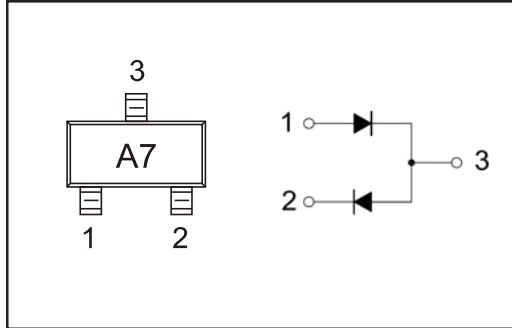
**Capacitance Characteristics**



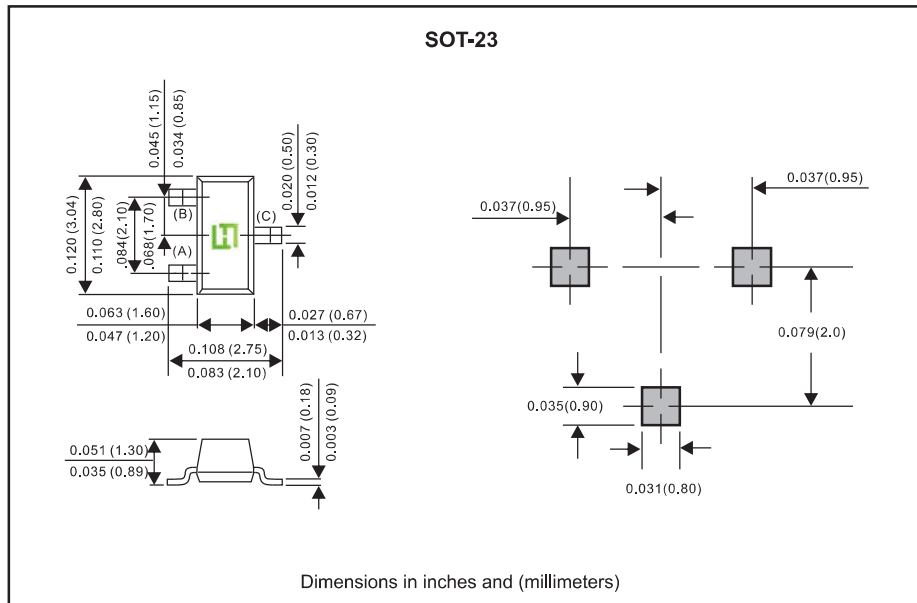
**Power Derating Curve**



## Pinning information

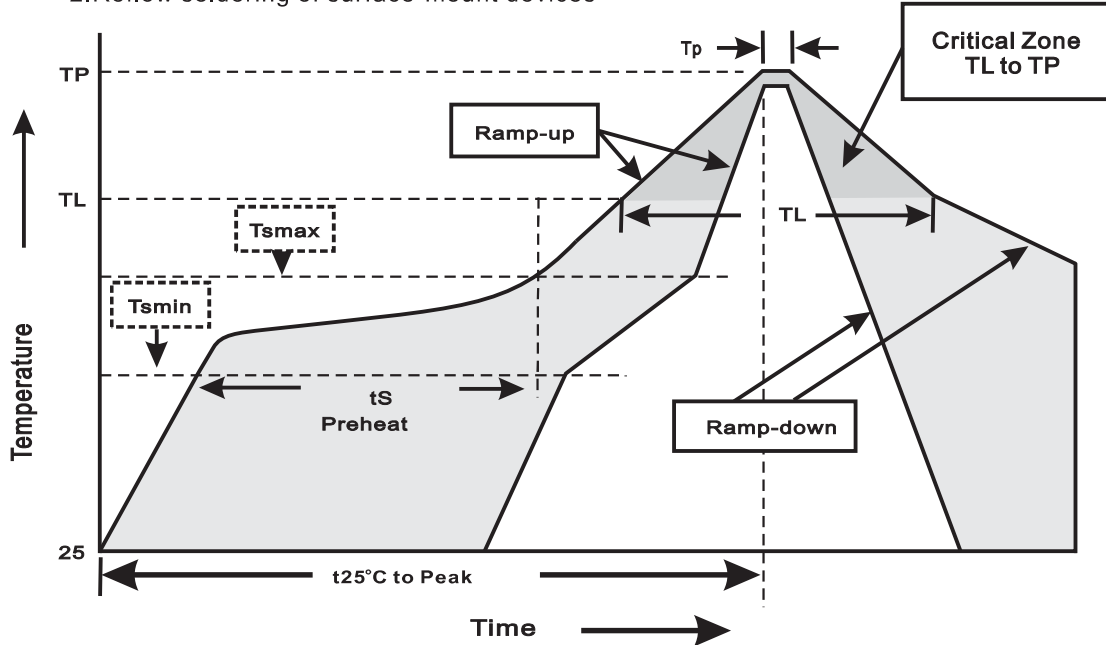


## Package Outline



**Suggested thermal profiles for soldering processes**

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T <sub>L</sub> to T <sub>P</sub> )	<3°C/sec
Preheat -Temperature Min(T <sub>smin</sub> ) -Temperature Max(T <sub>smax</sub> ) -Time(min to max)(t <sub>s</sub> )	150°C 200°C 60~120sec
T <sub>smax</sub> to T <sub>L</sub> -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T <sub>L</sub> ) -Time(t <sub>L</sub> )	217°C 60~260sec
Peak Temperature(T <sub>P</sub> )	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t <sub>P</sub> )	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes

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