

## Features

- Fast switching speed
- High conductance

## APPLICATIONS

- High speed switching application

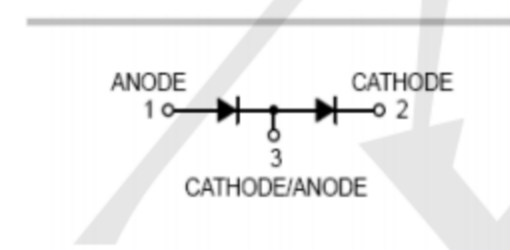
## Ordering Information

- Shipping Qty:3000/7inch Tape& Reel

SOT23



## Circuit Diagram



## Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter                                             | Symbol    | Value | Unit |
|-------------------------------------------------------|-----------|-------|------|
| DC Blocking Voltage                                   | $V_R$     | 100   | V    |
| Average Rectified Output Current                      | $I_F$     | 200   | mA   |
| Forward Continuous Current (Max.)                     | $I_{FM}$  | 600   | mA   |
| Peak Forward Surge Current, 1ms Single Half-sine-wave | $I_{FSM}$ | 2     | A    |
| Peak Forward Surge Current, 1s Single Half-sine-wave  | $I_{FSM}$ | 1     | A    |
| Recurrent Peak Forward Current                        | $I_{FRM}$ | 700   | mA   |

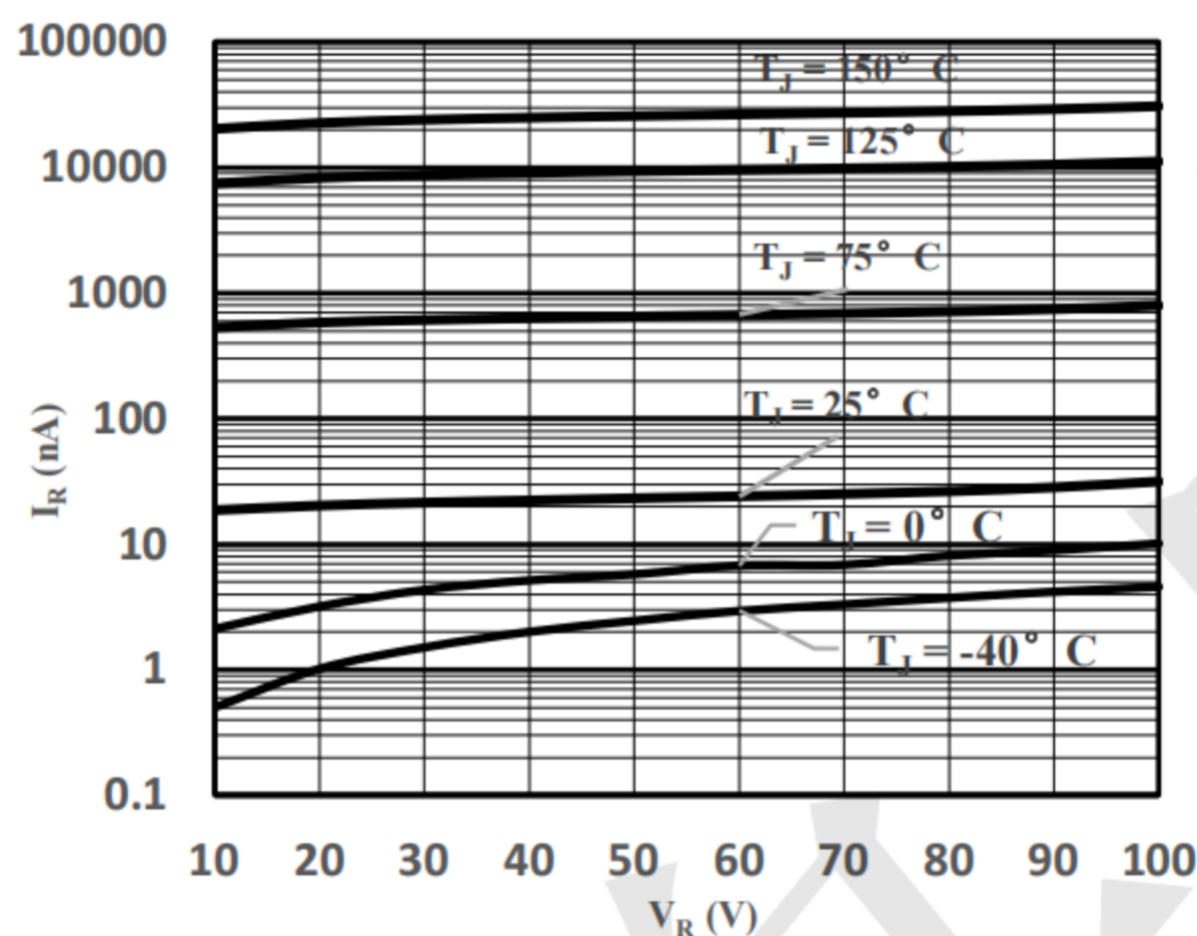
## Thermal Characteristics

| Parameter                              | Symbol          | Value      | Unit                 |
|----------------------------------------|-----------------|------------|----------------------|
| Power Dissipation                      | $P_D$           | 350        | mW                   |
| Thermal Resistance Junction-to-Air *1  | $R_{\theta JA}$ | 342        | $^{\circ}\text{C/W}$ |
| Thermal Resistance Junction-to-Case *1 | $R_{\theta JC}$ | 208        | $^{\circ}\text{C/W}$ |
| Thermal Resistance Junction-to-Lead *1 | $R_{\theta JL}$ | 187        | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range   | $T_J$           | -55 ~ +150 | $^{\circ}\text{C}$   |
| Storage Temperature Range              | $T_{STG}$       | 55 ~ +150  | $^{\circ}\text{C}$   |

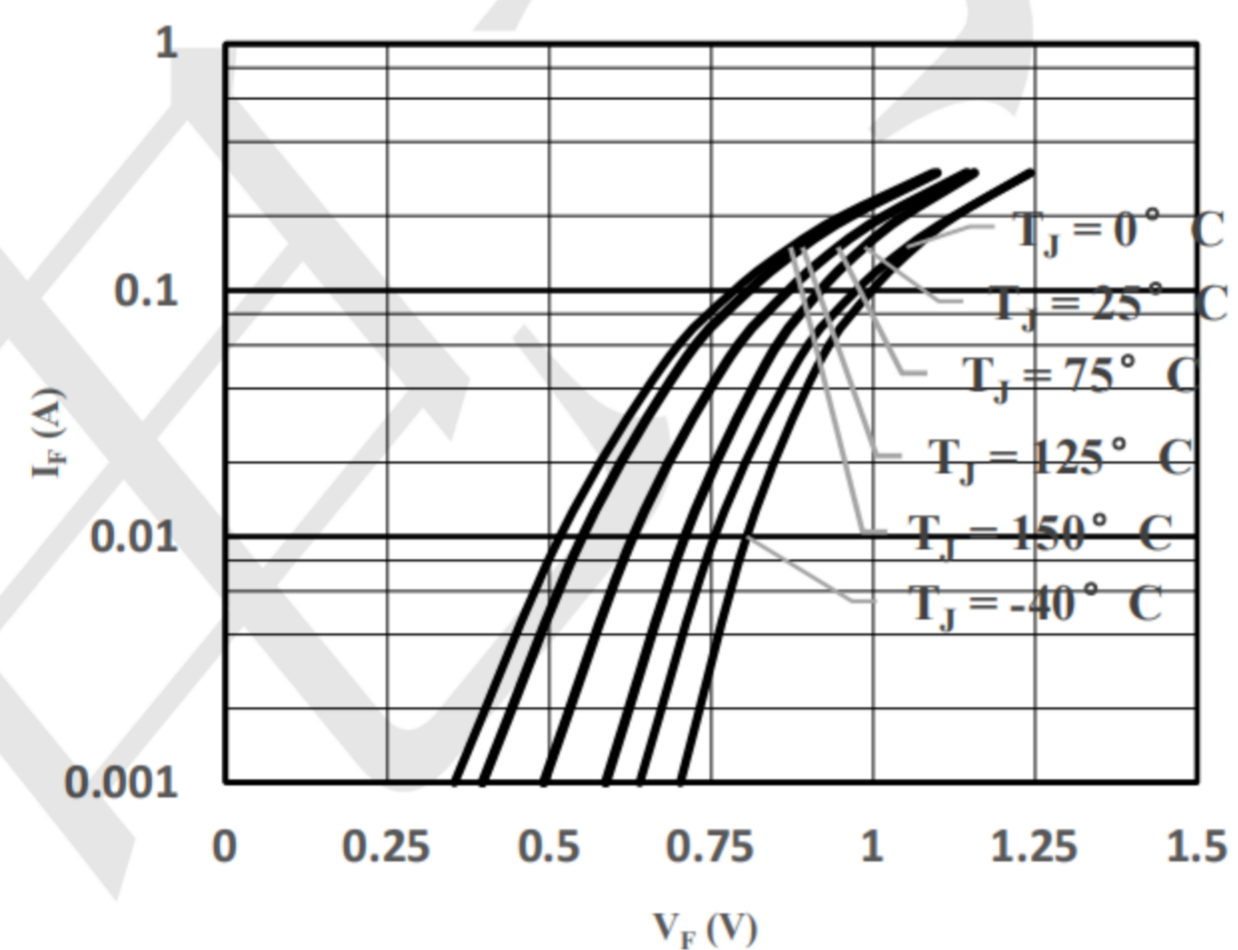
**Electrical Characteristics** (T = 25°C unless otherwise noted)

| Parameter                    | Symbol      | Test Condition                                                       | Min. | Typ. | Max. | Unit    |
|------------------------------|-------------|----------------------------------------------------------------------|------|------|------|---------|
| Reverse Breakdown Voltage    | $V_{(BR)R}$ | $I_R = 100\mu A$                                                     | 100  | -    | -    | V       |
|                              |             | $I_R = 5\mu A$                                                       | 75   | -    | -    | V       |
| Forward Voltage              | $V_F$       | $I_F = 10mA$                                                         | -    | -    | 1    | V       |
| Maximum Peak Reverse Current | $I_R$       | $V_R = 20V$                                                          | -    | -    | 25   | nA      |
|                              |             | $V_R = 75V$                                                          | -    | -    | 5    | $\mu A$ |
| Total Capacitance            | $C_J$       | $V_R = 0V, f = 1.0MHz$                                               | -    | -    | 4    | pF      |
| Reverse Recovery Time        | $t_{rr}$    | $I_F = 10mA, V_R = 6V$<br>$I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ | -    | -    | 4    | ns      |

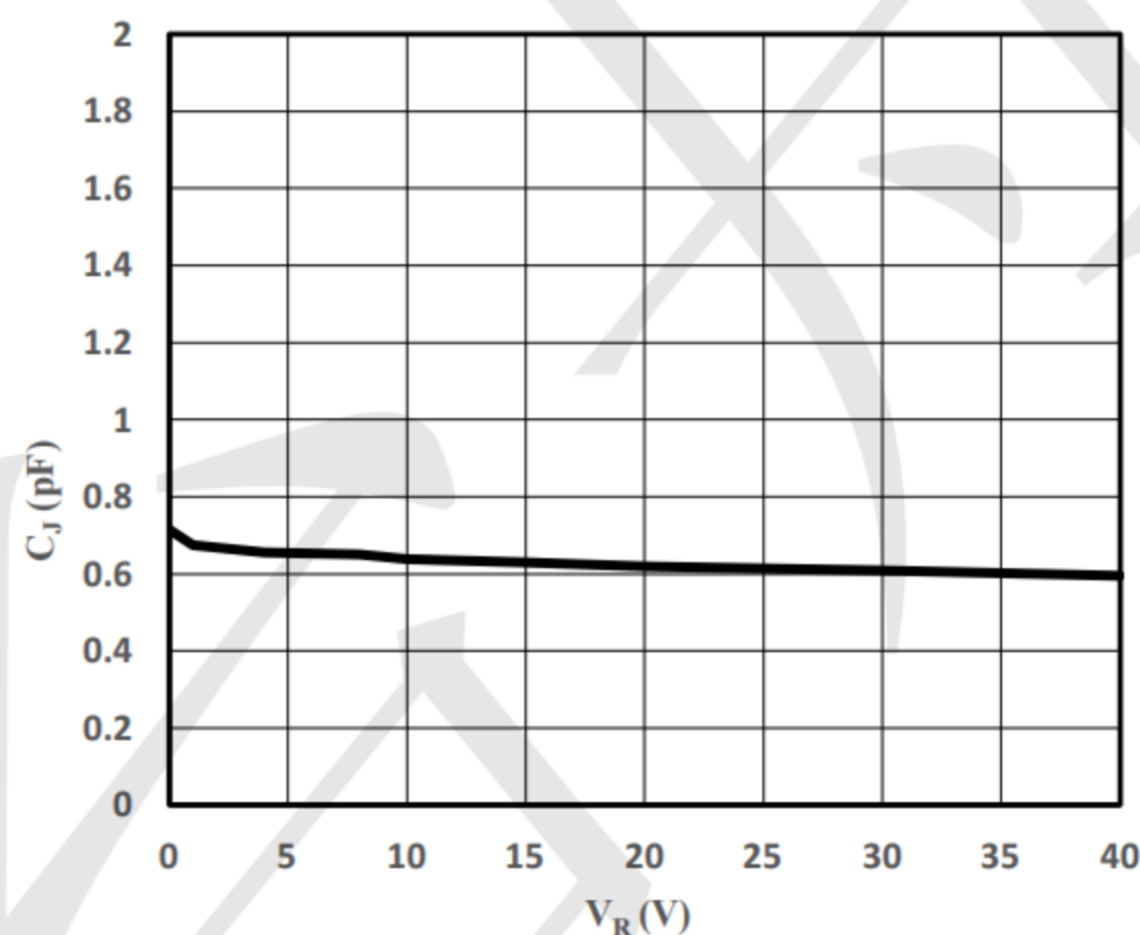
**Typical Electrical Characteristic Curves**



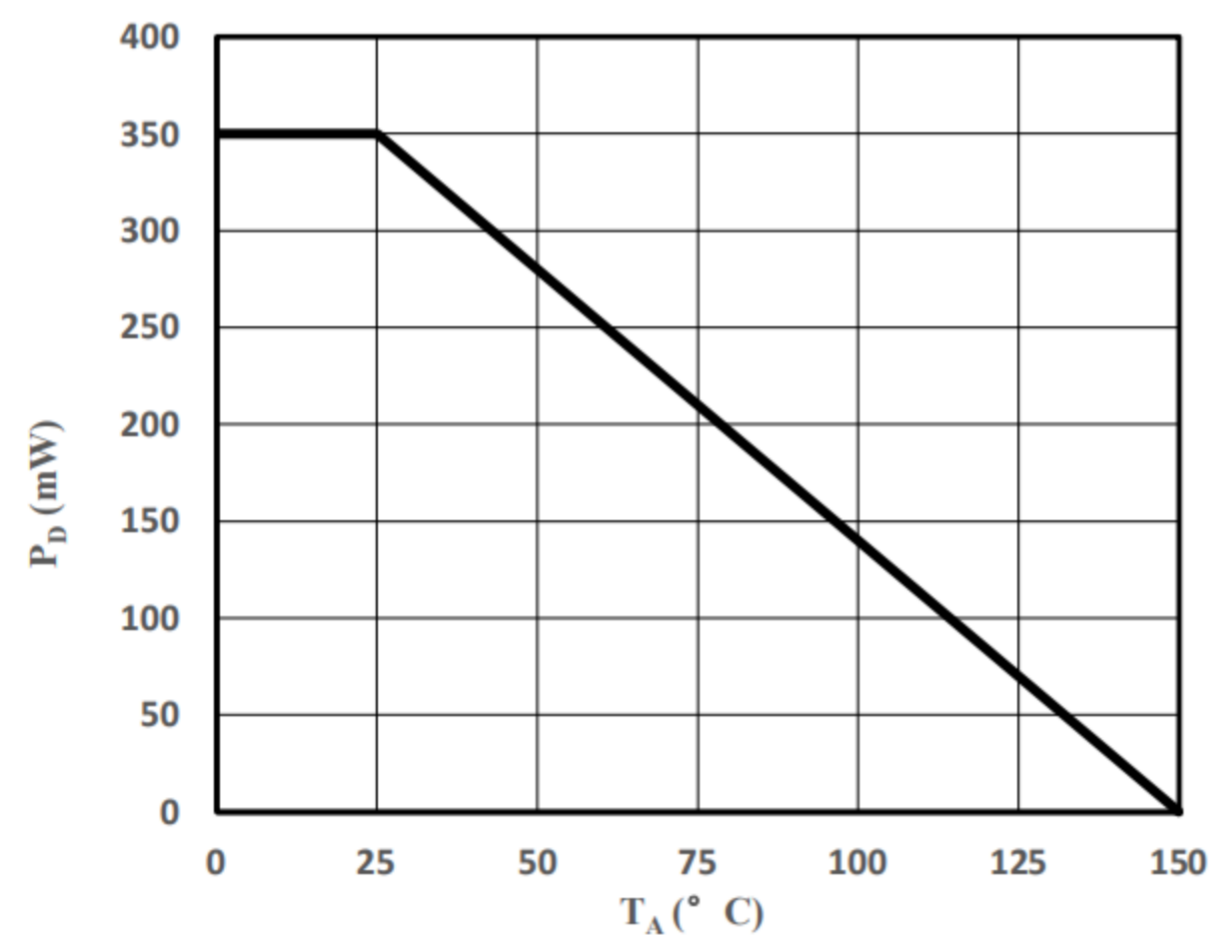
**Fig 1 Typical Reverse Characteristic**



**Fig 2 Typical Forward Characteristics**



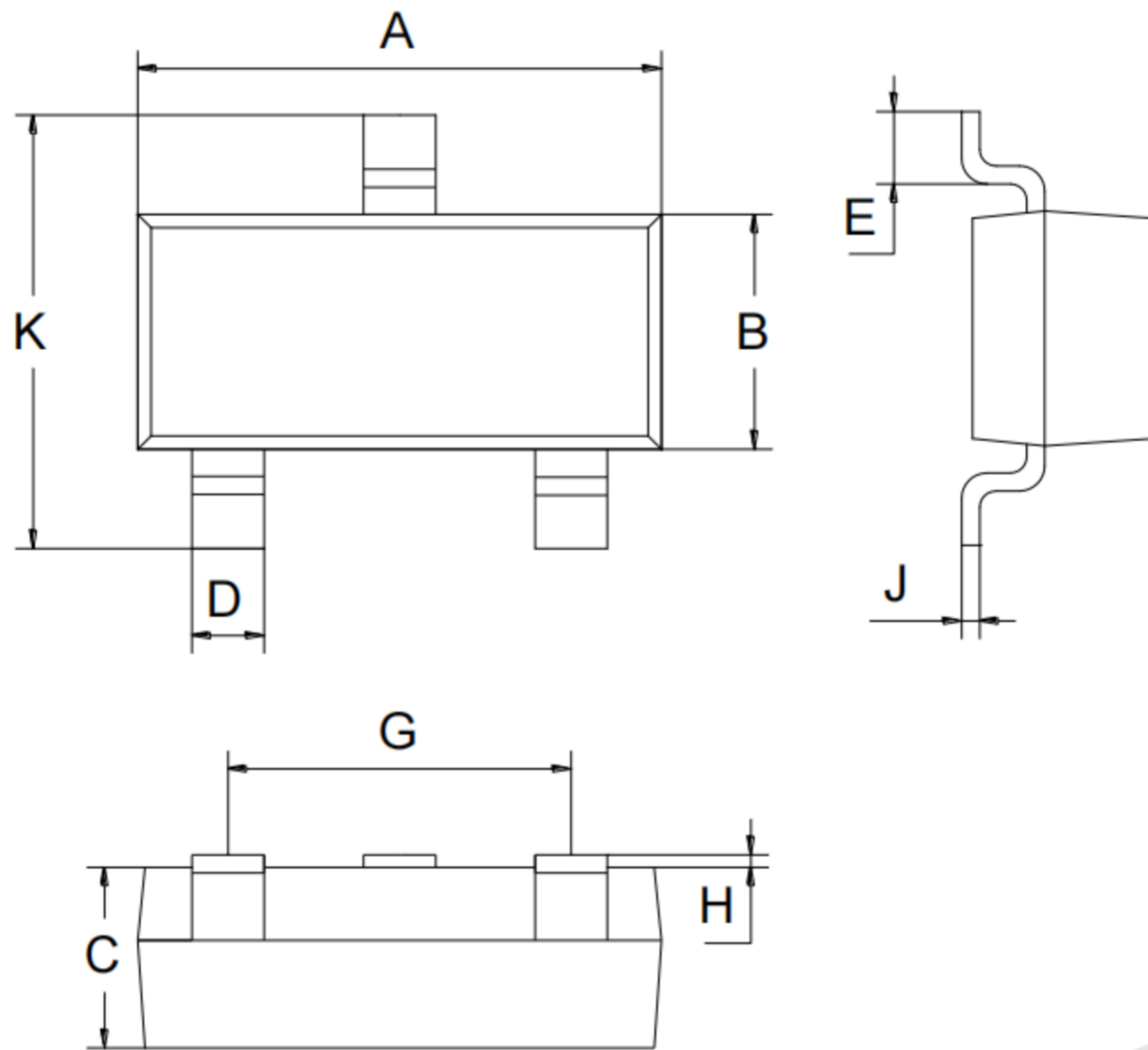
**Fig 3 Capacitance vs. Reverse Voltage**



**Fig 4 Power Derating Curve**



## Outline Drawing - SOT23 (unit: mm)



| SOT-23 |      |      |
|--------|------|------|
| Dim    | Min  | Max  |
| A      | 2.70 | 3.10 |
| B      | 1.10 | 1.50 |
| C      | 0.90 | 1.10 |
| D      | 0.30 | 0.50 |
| E      | 0.35 | 0.48 |
| G      | 1.80 | 2.00 |
| H      | 0.02 | 0.10 |
| J      | 0.05 | 0.15 |
| K      | 2.20 | 2.60 |

## Mounting Pad Layout-SOT23 (unit: mm)

