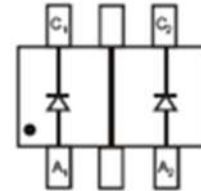




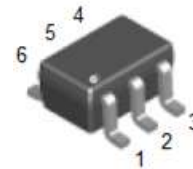
## Features

- Fast switching.
- Low forward voltage drop.
- Ultra-small surface mount package.
- PN junction guard ring for transient and ESD protection.



## Typical Applications

- High speed switching applications.
- Circuit protecting.
- Voltage clamping.



## Mechanical Data

- Case: SOT-363
- Terminals: solderable per MIL-STD-202, Method 208.

**SOT-363**

## Ordering Information

| Part Number | Package | Shipping       | Marking Code |
|-------------|---------|----------------|--------------|
| BAS70JW□    | SOT-363 | 3000/Tape&Reel | K78          |

□: none is for Lead Free package;  
 “G” is for Halogen Free package.

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

| Parameter   | Symbol       | Limits | Unit |
|---|--------------|--------|------|
| Peak Repetitive Reverse Voltage                               | $V_{RRM}$    | 70     | V    |
| Working Peak Reverse Voltage                                  | $V_{RWM}$    |        |      |
| DC Reverse Voltage  | $V_R$        |        |      |
| RMS Reverse voltage   | $V_{R(RMS)}$ | 49     | V    |
| Forward Continuous Current *                                  | $I_F$        | 70     | mA   |
| Non-Repetitive Peak Forward Surge Current@ $t_p=8.3\text{ms}$ | $I_{FSM}$    | 100    | mA   |
| Power Dissipation *   | $P_d$        | 200    | mW   |

\* part mounted on FR-4 board with recommended pad layout



## Thermal Characteristics

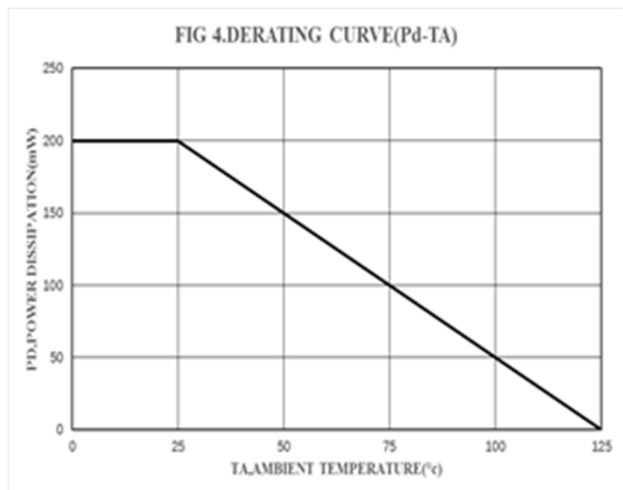
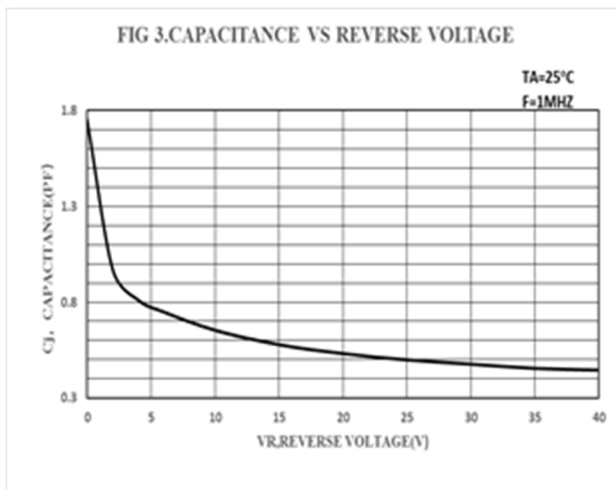
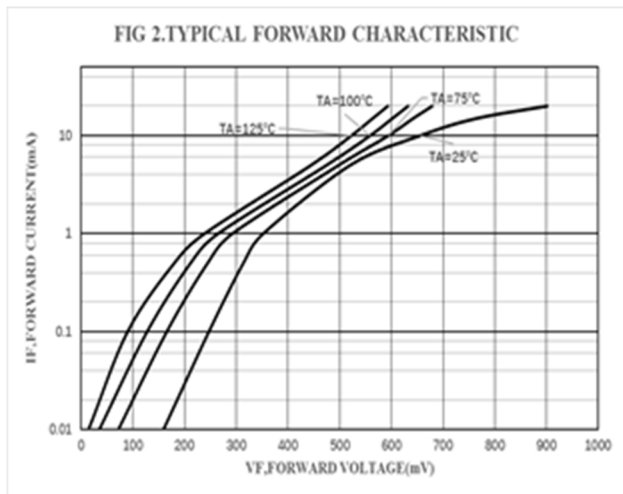
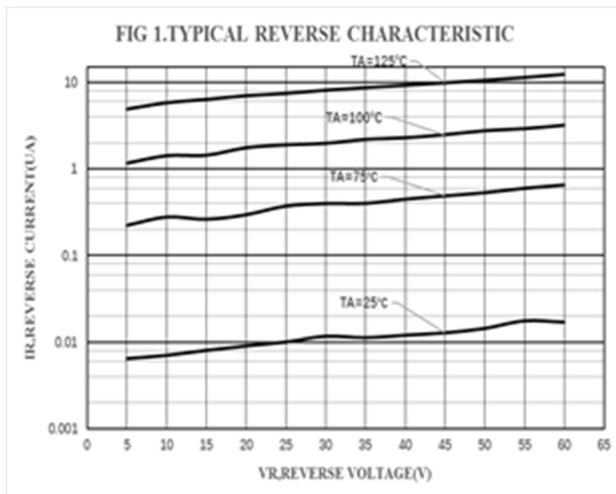
| Parameter                                  | Symbol          | Limits      | Unit          |
|--|-----------------|-------------|---------------|
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 500         | $^{\circ}C/W$ |
| Operating Temperature Range                | $T_j$           | -55 to +125 | $^{\circ}C$   |
| Storage Temperature Range                  | $T_{STG}$       | -55 to +150 | $^{\circ}C$   |

## Electrical Characteristics (@ $T_A=25^{\circ}C$ unless otherwise specified)

| Parameter                     | Symbol   | Conditions                                    | Min | Typ | Max  | Unit |
|-------------------------------|----------|---|-----|-----|------|------|
| Forward Voltage *1            | $V_F$    | $I_F=1mA$                                     |     |     | 0.41 | V    |
|                               |          | $I_F=15mA$                                    |     |     | 1    | V    |
| Reverse Leakage Current *2    | $I_R$    | $V_R=50V$                                     |     |     | 100  | nA   |
| Capacitance Between Terminals | $C_T$    | $V_R=0V, f=1MHz$                              |     |     | 2    | pF   |
| Reverse Recovery Time         | $t_{rr}$ | $I_F=I_R=10mA, I_{rr}=0.1*I_R, R_L=100\Omega$ |     |     | 5    | ns   |

\*1: pulse test,  $t_p \leq 300\mu s$   
 \*2: pulse test,  $t_p \leq 5ms$

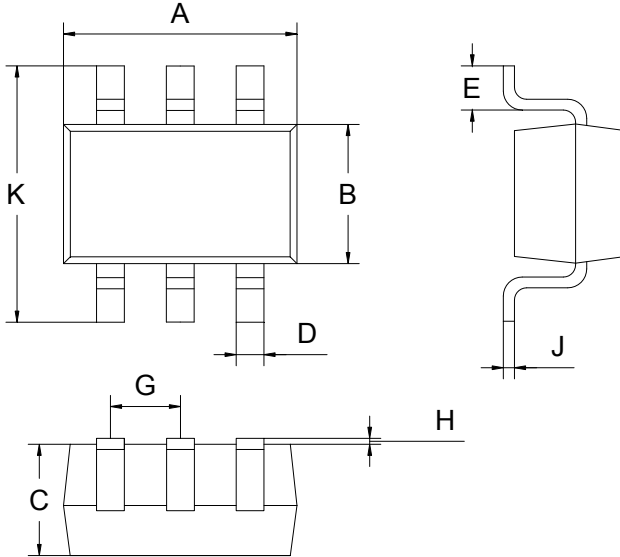
## Ratings and Characteristic Curves ( $T_A=25^{\circ}C$ unless otherwise noted)





## Package Outline Dimensions(unit:mm)

### SOT-363



| SOT-363 |      |      |
|---------|------|------|
| Dim     | Min  | Max  |
| A       | 2.00 | 2.20 |
| B       | 1.15 | 1.35 |
| C       | 0.85 | 1.05 |
| D       | 0.15 | 0.35 |
| E       | 0.25 | 0.40 |
| G       | 0.60 | 0.70 |
| H       | 0.02 | 0.10 |
| J       | 0.05 | 0.15 |
| K       | 2.20 | 2.40 |

## Mounting Pad Layout(unit:mm)

### SOT-363

