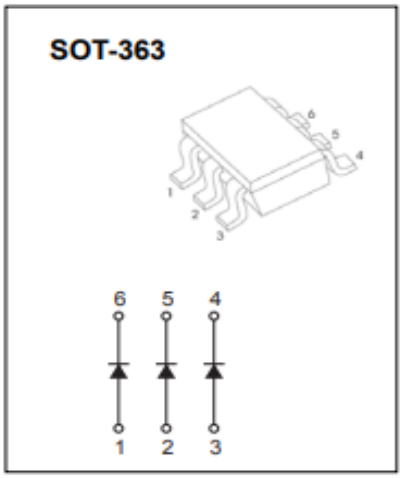
# BAS16TW

SWITCHING DIODE

**FEATURES**

- **Fast Switching Speed**
- **For General Purpose Switching Applications**
- **High Conductance**




**Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25℃**

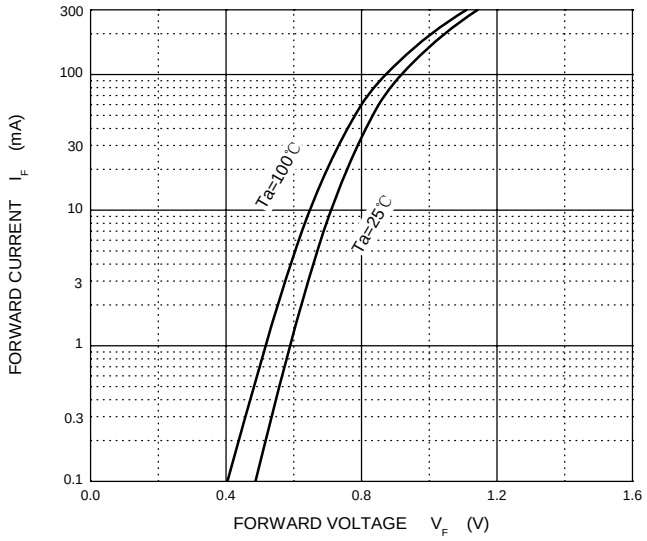
| Parameter | Symbol | Limit | Unit |
|---|---|---|---|
| **Non-Repetitive Peak Reverse Voltage** | $V_{RM}$ | 100 | V |
| **Peak Repetitive Peak Reverse Voltage**<br>**Working Peak Reverse Voltage**<br>**DC Blocking Voltage** | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 75 | V |
| **RMS Reverse Voltage** | $V_{R(RMS)}$ | 53 | V |
| **Forward Continuous Current** | $I_{FM}$ | 300 | mA |
| **Average Rectified Output Current** | $I_O$ | 150 | mA |
| **Non-Repetitive Peak Forward Surge Current @t=8.3ms** | $I_{FSM}$ | 2.0 | A |
| **Power Dissipation** | Pd | 225 | mW |
| **Thermal Resistance Junction to Ambient** | $R_{\theta JA}$ | 556 | ℃/W |
| **Junction Temperature** | $T_j$ | 150 | ℃ |
| **Storage Temperature** | $T_{STG}$ | -55~+150 | ℃ |

**ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)**

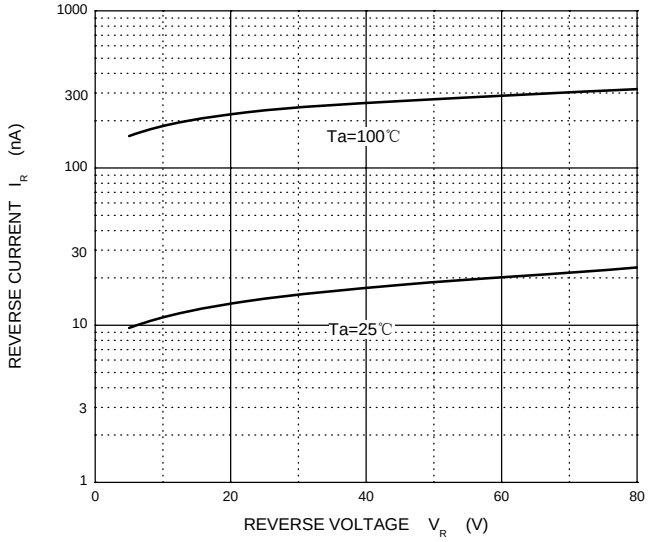
| Parameter | Symbol | Test conditions | Min | Max | Unit |
|---|---|---|---|---|---|
| **Reverse breakdown voltage** | $V_{(BR)}$ | $I_R$= 100μA | 75 | | V |
| **Reverse voltage leakage current** | $I_R$ | $V_R$=75V | | 1 | μA |
| **Forward voltage** | $V_F$ | $I_F$=1mA<br>$I_F$=10mA<br>$I_F$=50mA<br>$I_F$=150mA | | 0.715<br>0.855<br>1<br>1.25 | V |
| **Diode capacitance** | $C_D$ | $V_R$=0, f=1MHz | | 2 | pF |
| **Reveres recovery time** | $t_{rr}$ | $I_F$=$I_R$=10mA,$I_{rr}$=0.1×$I_R$,<br>$R_L$=100Ω | | 6 | ns |

## Typical Characteristics

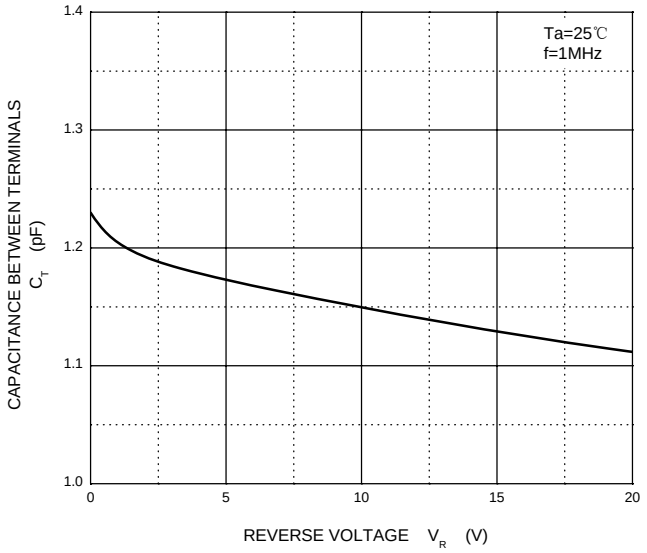
**Forward Characteristics**



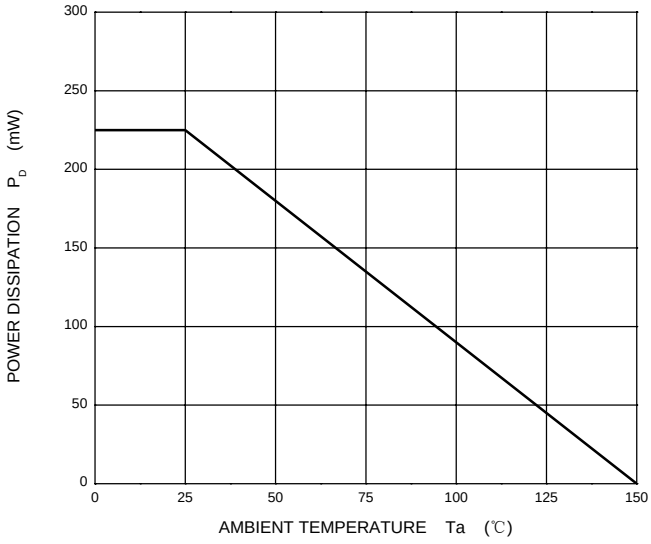

**Reverse Characteristics**




**Capacitance Characteristics**

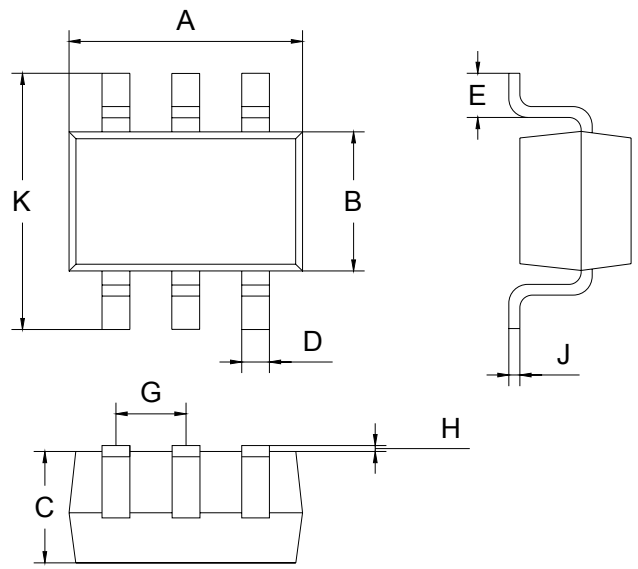



**Power Derating Curve**



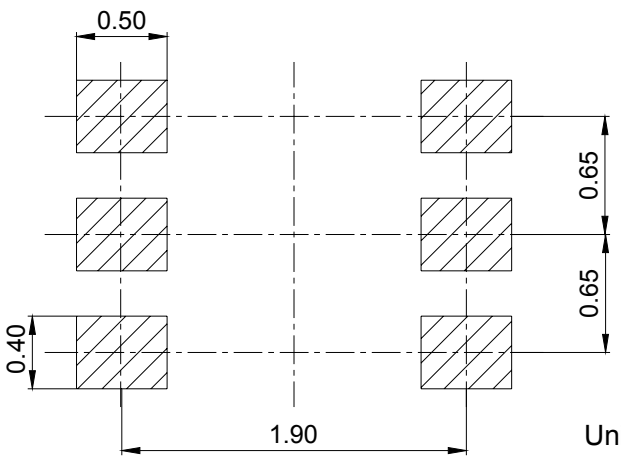
## PACKAGE OUTLINE

Plastic surface mounted package SOT-363




| SOT-363 | | |
|---|---|---|
| Dim | Min | Max |
| A | 2.00 | 2.20 |
| B | 1.15 | 1.35 |
| C | 0.95 Typical | |
| D | 0.25 Typical | |
| E | 0.25 | 0.40 |
| G | 0.60 | 0.70 |
| H | 0.02 | 0.10 |
| J | 0.10 Typical | |
| K | 2.2 | 2.4 |
| All Dimensions in mm | | |

## SOLDERING FOOTPRINT




Unit : mm