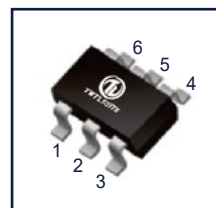
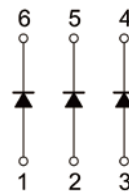


## Features

- Low Forward Voltage Drop
- Fast Switching
- Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version



SOT-363



Equivalent Circuit

## Absolute Maximum Ratings(TA=25℃)

| Symbol           | Parameter                                          | Value    | Unit |
|------------------|----------------------------------------------------|----------|------|
| V <sub>RRM</sub> | Peak Repetitive Peak Reverse Voltage               | 30       | V    |
| V <sub>RWM</sub> | Working Peak Reverse Voltage                       |          |      |
| V <sub>R</sub>   | DC Blocking Voltage                                |          |      |
| I <sub>O</sub>   | Forward Continuous Current                         | 200      | mA   |
| I <sub>FRM</sub> | Repetitive Peak Forward Current                    | 300      | mA   |
| I <sub>FSM</sub> | Non-repetitive Peak Forward Surge Current @t=8.3ms | 600      | mA   |
| P <sub>d</sub>   | Power Dissipation                                  | 200      | mW   |
| R <sub>θJA</sub> | Thermal Resistance From Junction To Ambient        | 500      | ℃/W  |
| T <sub>J</sub>   | Operating Junction Temperature Range               | 125      | ℃    |
| T <sub>stg</sub> | Storage Temperature Range                          | -55~+150 | ℃    |

## Electrical Characteristics (TA=25℃ unless otherwise specified)

| Symbol            | Parameter                 | Test conditions                                                                                  | Min | Max  | Unit |
|-------------------|---------------------------|--------------------------------------------------------------------------------------------------|-----|------|------|
| V <sub>(BR)</sub> | Reverse breakdown voltage | I <sub>R</sub> =100μA                                                                            | 30  |      | V    |
| I <sub>R</sub>    | Reverse current           | V <sub>R</sub> =25V                                                                              |     | 2    | μA   |
| V <sub>F</sub>    | Forward voltage           | I <sub>F</sub> =1mA                                                                              |     | 320  | mV   |
|                   |                           | I <sub>F</sub> =10mA                                                                             |     | 400  |      |
|                   |                           | I <sub>F</sub> =30mA                                                                             |     | 500  |      |
|                   |                           | I <sub>F</sub> =100mA                                                                            |     | 1000 |      |
| C <sub>D</sub>    | Diode capacitance         | V <sub>R</sub> =1V, f=1MHz                                                                       |     | 10   | pF   |
| t <sub>rr</sub>   | Reverse recovery time     | I <sub>F</sub> =I <sub>R</sub> =10mA, I <sub>rr</sub> =0.1×I <sub>R</sub> , R <sub>L</sub> =100Ω |     | 5    | nS   |

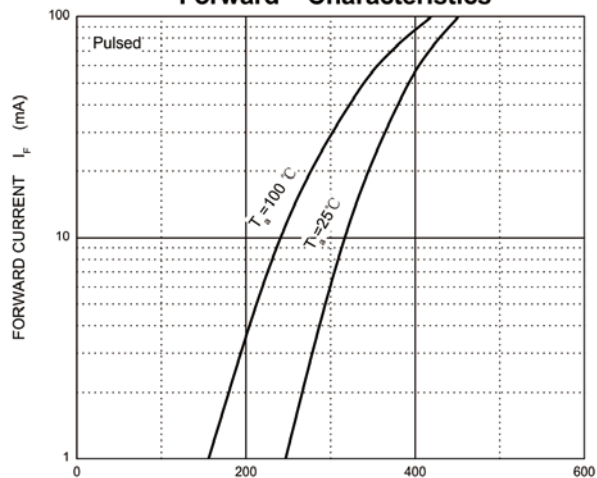
## Ordering information

| Product ID | Marking | Naming rule                                                                                                                                                          | Pack    | Qty(PCS) |
|------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|
| BAT54TW    | KLA     | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> BAT54TW </div><br><div style="text-align: center;"> ↓<br/> 产品名称<br/> product name </div> | SOT-363 | 3000     |

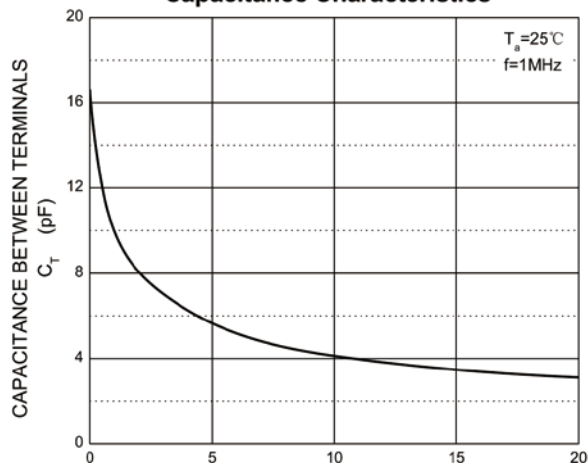


## Typical Characteristics

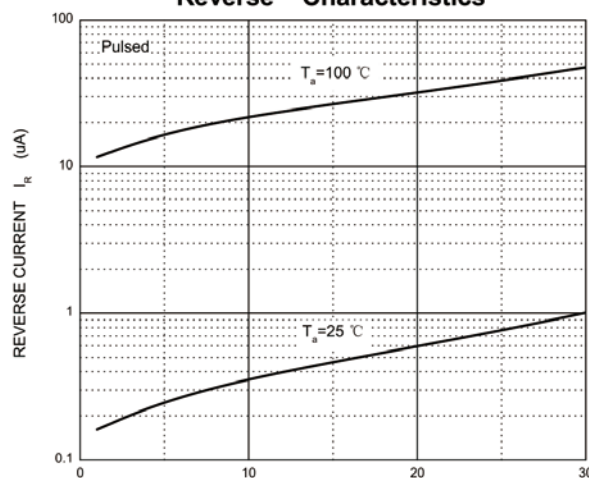
Forward Characteristics

FORWARD VOLTAGE  $V_F$  (mV)

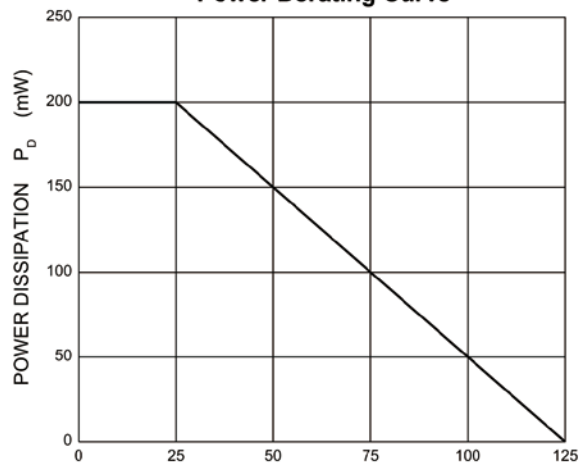
Capacitance Characteristics

REVERSE VOLTAGE  $V_R$  (V)

Reverse Characteristics

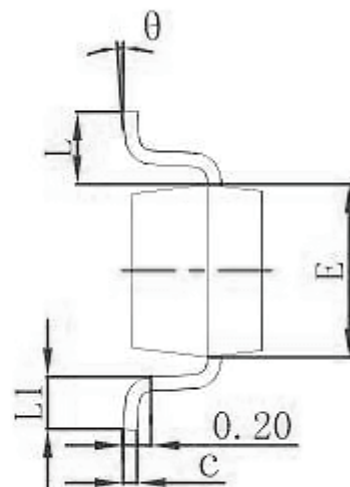
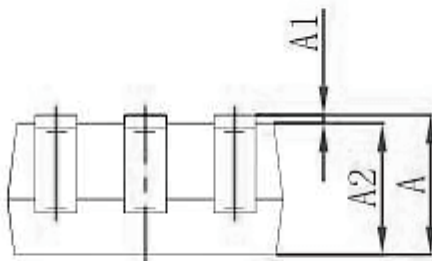
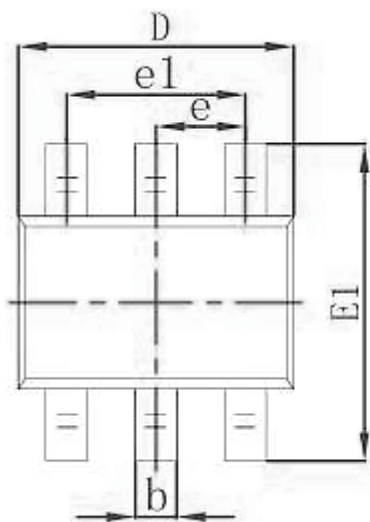
REVERSE VOLTAGE  $V_R$  (V)

Power Derating Curve

AMBIENT TEMPERATURE  $T_a$  (°C)



## SOT-363 Package Outline Dimensions



| Symbol   | Dimensions in Millimeters |       | Dimensions in Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        | 0.900                     | 1.100 | 0.035                | 0.043 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 0.900                     | 1.000 | 0.035                | 0.039 |
| b        | 0.150                     | 0.350 | 0.006                | 0.014 |
| c        | 0.100                     | 0.150 | 0.004                | 0.006 |
| D        | 2.000                     | 2.200 | 0.079                | 0.087 |
| E        | 1.150                     | 1.350 | 0.045                | 0.053 |
| E1       | 2.150                     | 2.450 | 0.085                | 0.096 |
| e        | 0.650 TYP                 |       | 0.026 TYP            |       |
| e1       | 1.200                     | 1.400 | 0.047                | 0.055 |
| L        | 0.525 REF                 |       | 0.021 REF            |       |
| L1       | 0.260                     | 0.460 | 0.010                | 0.018 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |