

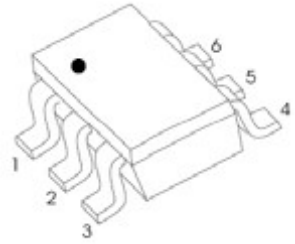


## BAT54ADW /BAT54BRW /

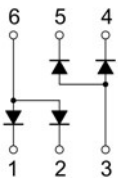
## BAT54CDW /BAT54SDW /BAT54TW SCHOTTKY BARRIER DIODE ARRAYS

### FEATURES

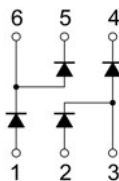
- Low Forward Voltage Drop
- Fast Switching
- Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version



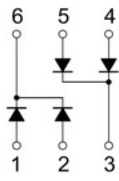
SOT-363



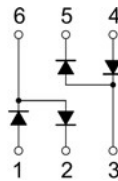
BAT54ADW



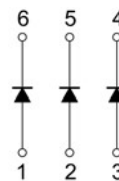
BAT54BRW



BAT54CDW



BAT54SDW



BAT54TW

Marking: BAT54ADW : KL6

BAT54BRW : KLB

BAT54CDW : KL7

BAT54SDW : KL8

BAT54TW : KLA



### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

| Symbol          | Parameter  | Value      | Unit                 |
|-----------------|--|------------|----------------------|
| $V_{RRM}$       | Repetitive Peak Reverse Voltage                              | 30         | V                    |
| $V_{RWM}$       | Peak Working Reverse Voltage                                 |            |                      |
| $V_R$           | DC Blocking Voltage  |            |                      |
| $I_O$           | Forward Continuous Current                                   | 200        | mA                   |
| $I_{FRM}$       | Repetitive Peak Forward Current                              | 300        | mA                   |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | 600        |                      |
| $P_D$           | Power Dissipation  | 200        | mW                   |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient                  | 500        | $^{\circ}\text{C/W}$ |
| $T_j$           | Operating Junction Temperature Range                         | -40 ~ +125 | $^{\circ}\text{C}$   |
| $T_{stg}$       | Storage Temperature Range                                    | -55 ~ +150 | $^{\circ}\text{C}$   |

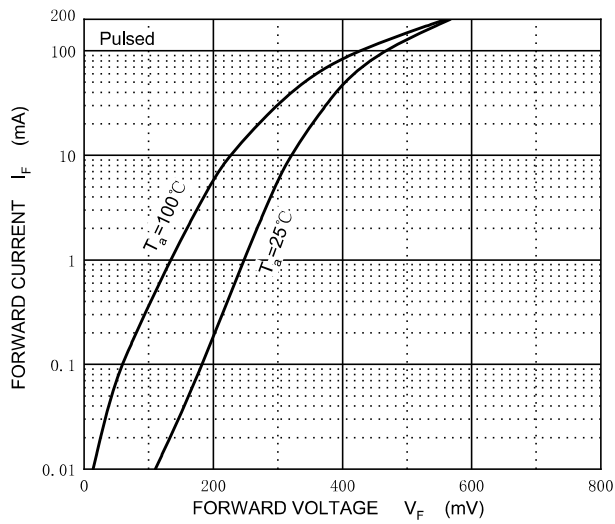
### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified )

| Parameter             | Symbol     | Test conditions  | Min | Typ | Max  | Unit          |
|-----------------------|------------|--|-----|-----|------|---------------|
| Reverse voltage       | $V_{(BR)}$ | $I_R=100\mu\text{A}$                                       | 30  |     |      | V             |
| Reverse current       | $I_R$      | $V_R=25\text{V}$   |     |     | 2    | $\mu\text{A}$ |
| Forward voltage       | $V_F$      | $I_F=1\text{mA}$   |     |     | 320  | mV            |
|                       |            | $I_F=10\text{mA}$  |     |     | 400  |               |
|                       |            | $I_F=30\text{mA}$  |     |     | 500  |               |
|                       |            | $I_F=100\text{mA}$   |     |     | 1000 |               |
| Total capacitance     | $C_{tot}$  | $V_R=1\text{V}, f=1\text{MHz}$                             |     |     | 10   | pF            |
| Reverse recovery time | $t_{rr}$   | $I_F=I_R=10\text{mA}, I_{rr}=0.1\times I_R, R_L=100\Omega$ |     |     | 5    | ns            |

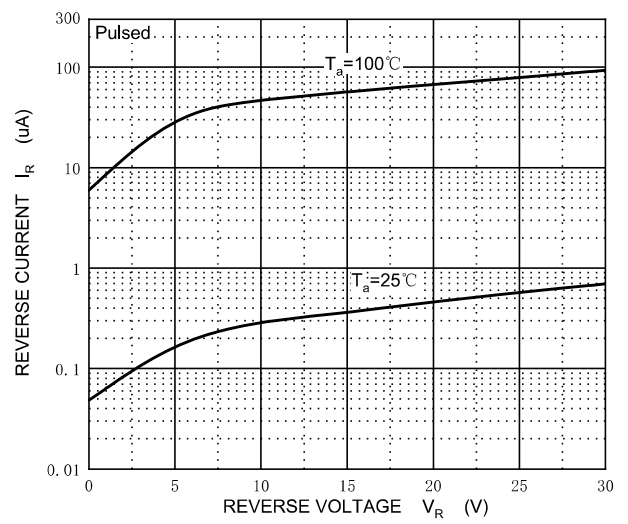


## Typical Characteristics

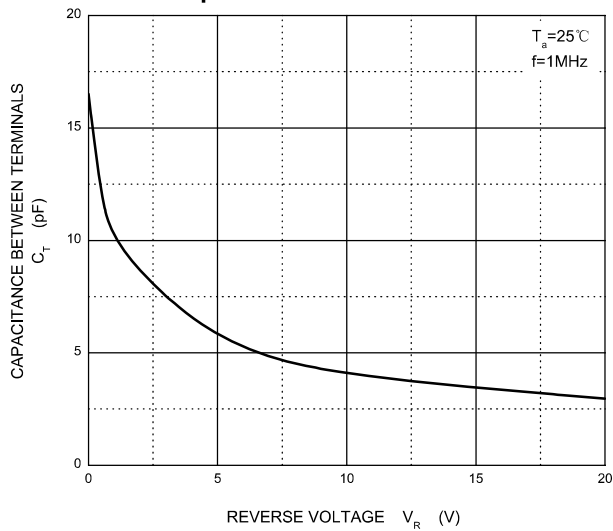
### Forward Characteristics



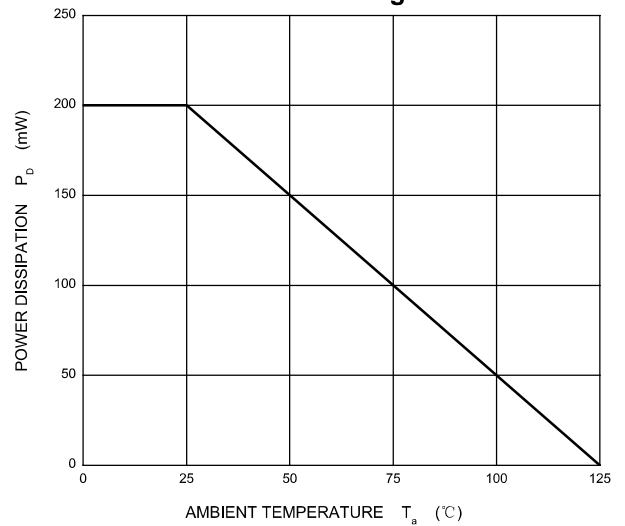
### Reverse Characteristics



### Capacitance Characteristics

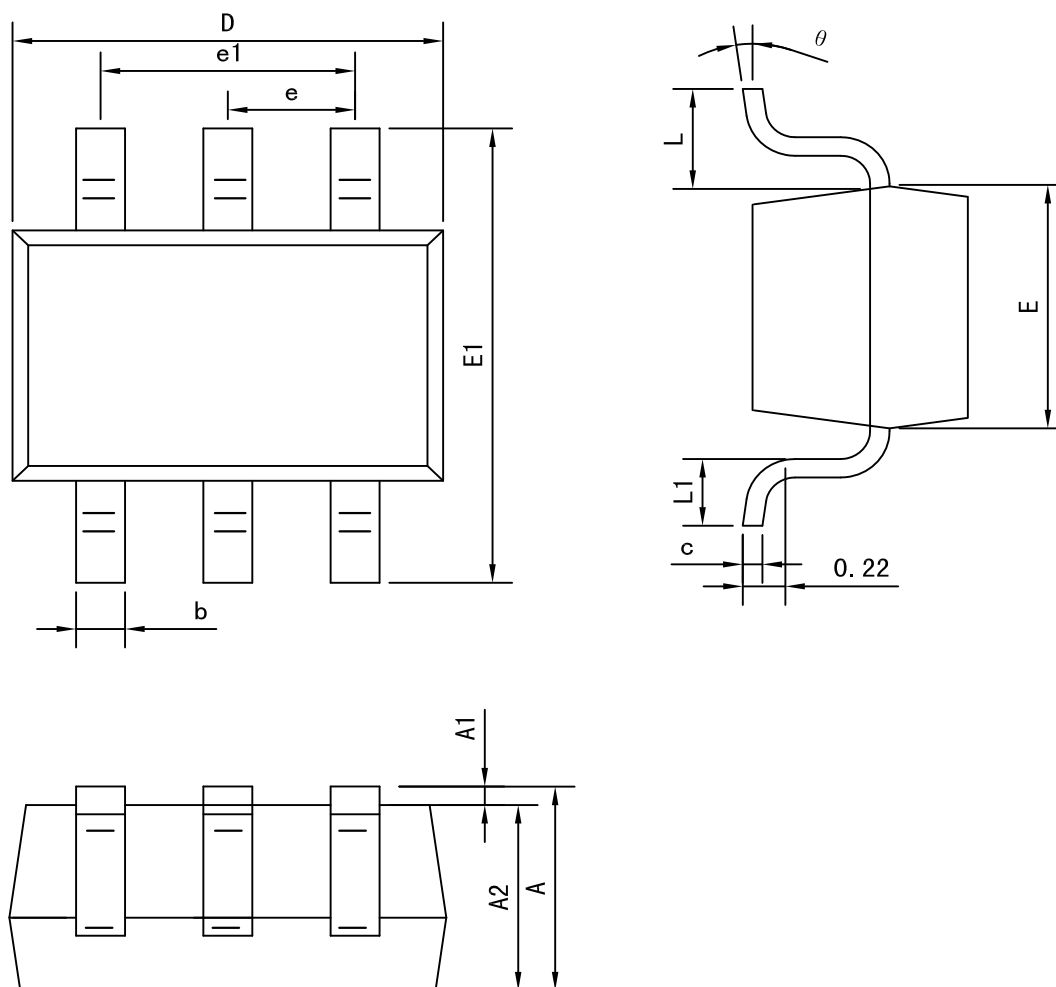


### Power Derating Curve





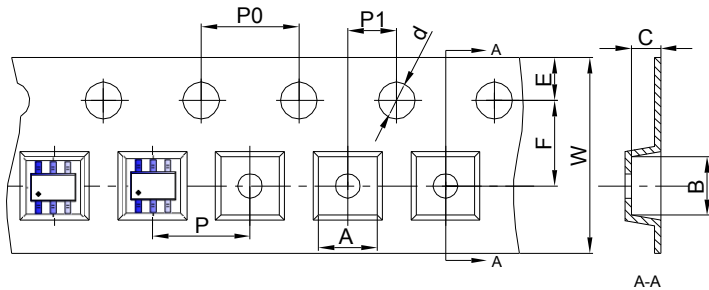
## SOT-363 Package outline dimensions



| Symbol   | Dimension in Millimeters |       |
|----------|--------------------------|-------|
|          | Min                      | Max   |
| A        | 0.900                    | 1.100 |
| A1       | 0.000                    | 0.100 |
| A2       | 0.900                    | 1.000 |
| b        | 0.150                    | 0.350 |
| c        | 0.080                    | 0.150 |
| D        | 2.000                    | 2.200 |
| E        | 1.150                    | 1.350 |
| E1       | 2.150                    | 2.450 |
| e        | 0.650 TYP                |       |
| e1       | 1.200                    | 1.400 |
| L        | 0.525 REF                |       |
| L1       | 0.260                    | 0.460 |
| $\theta$ | 0°                       | 8°    |



### SOT-363 Embossed Carrier Tape



#### Packaging Description:

SOT-363 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOT-363                      | 2.25 | 2.55 | 1.20 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

### SOT-363 Tape Leader and Trailer

