

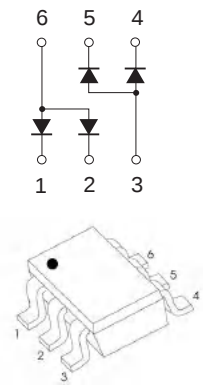


### BAW56DW SWITCHING DIODE

#### FEATURES

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

MAKING: KJC



SOT-363

#### Maximum Ratings @Ta=25°C

| Parameter                                                                                   | Symbol                          | Limit    | Unit |
|---------------------------------------------------------------------------------------------|---------------------------------|----------|------|
| Peak Repetitive Peak Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 75       | 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        | A    |
| Power Dissipation                                                                           | $P_D$                           | 200      | mW   |
| Thermal Resistance From Junction to Ambient                                                 | $R_{\theta JA}$                 | 625      | °C/W |
| Operating Junction Temperature                                                              | $T_J$                           | 150      | °C   |
| Storage Temperature                                                                         | $T_{STG}$                       | -55~+150 | °C   |

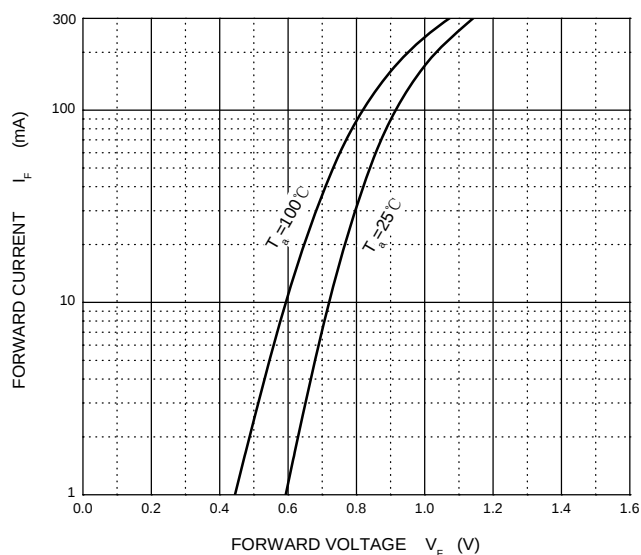
#### ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

| Parameter                       | Symbol     | Test conditions                                                   | Min | Max                        | Unit    |
|---------------------------------|------------|-------------------------------------------------------------------|-----|----------------------------|---------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R = 2.5\mu A$                                                  | 75  |                            | V       |
| Reverse voltage leakage current | $I_R$      | $V_R = 75V$<br>$V_R = 20V$                                        |     | 2.5<br>0.025               | $\mu A$ |
| Forward voltage                 | $V_F$      | $I_F = 1mA$<br>$I_F = 10mA$<br>$I_F = 50mA$<br>$I_F = 150mA$      |     | 715<br>855<br>1000<br>1250 | mV      |
| Capacitance between terminals   | $C_T$      | $V_R = 0, f = 1MHz$                                               |     | 2                          | pF      |
| Reveres recovery time           | $t_{rr}$   | $I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R,$<br>$R_L = 100\Omega$ |     | 4                          | ns      |

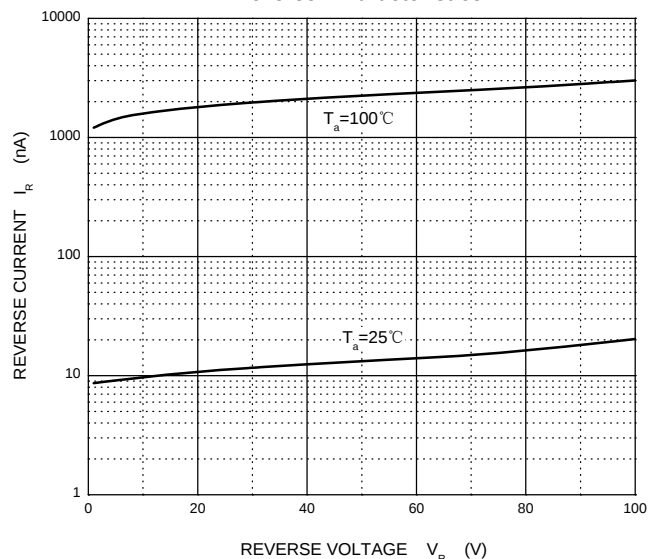


## Typical Characteristics

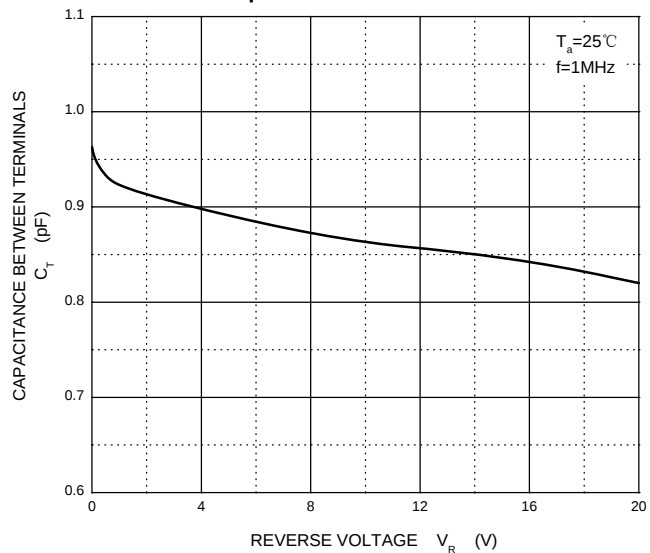
Forward Characteristics



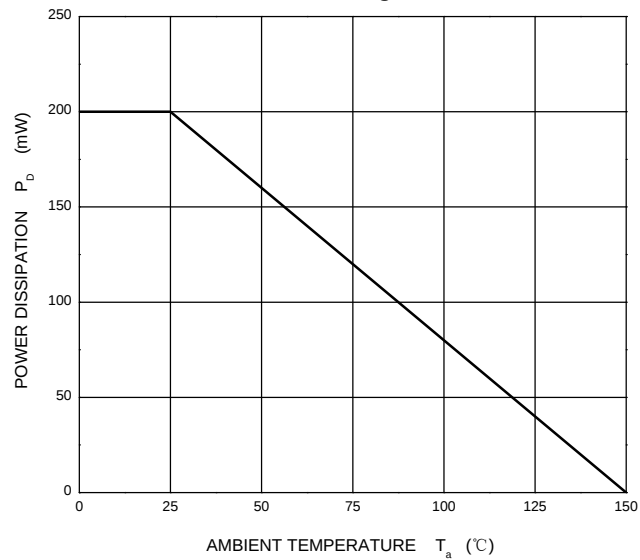
Reverse Characteristics



Capacitance Characteristics

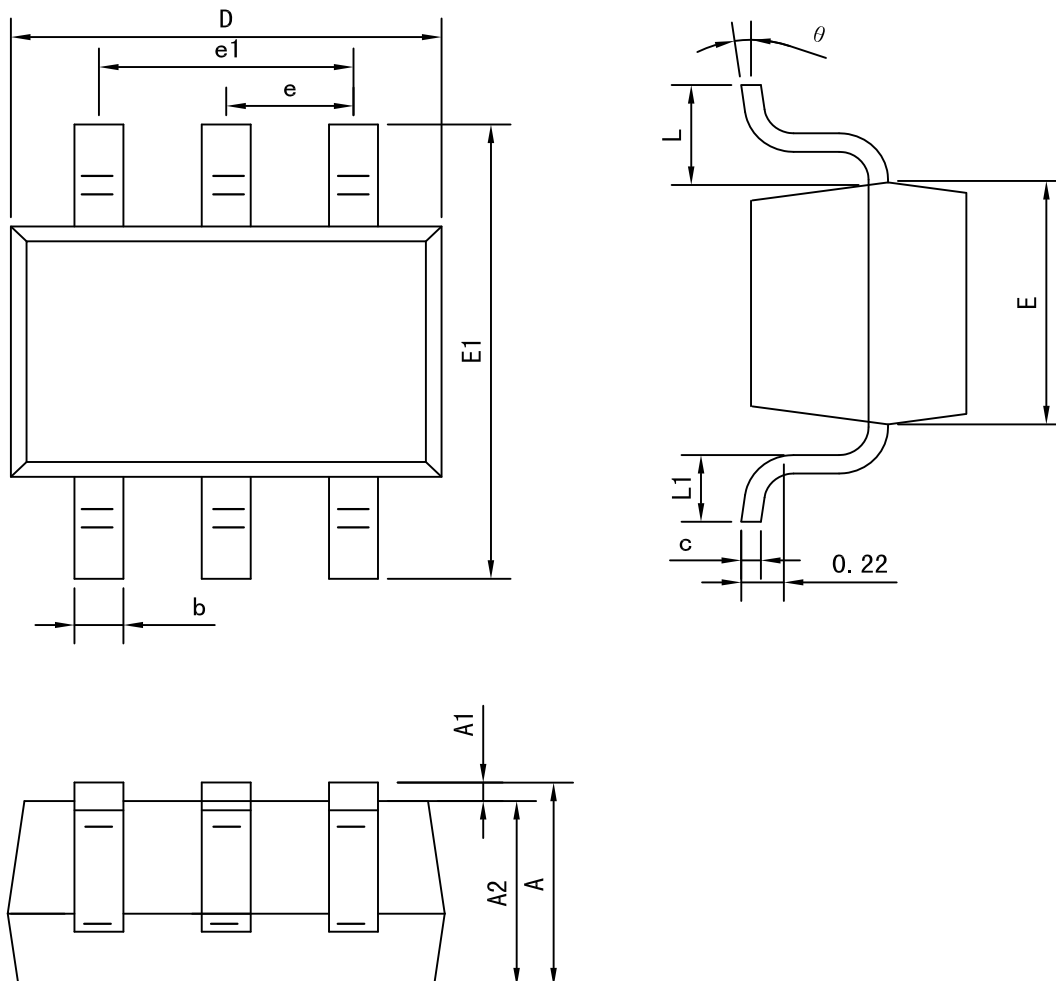


Power Derating Curve





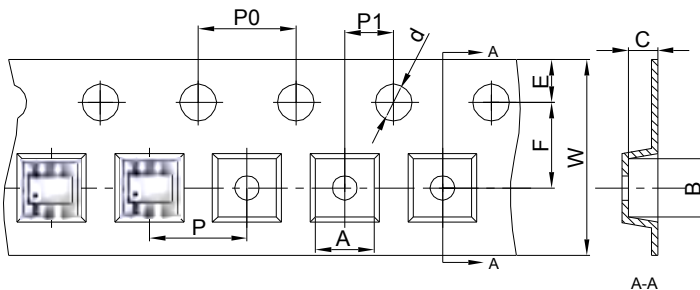
## SOT-363 Package outline dimensions



| 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

