

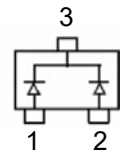
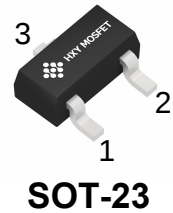


## Features

- Peak Forward Current:  $I_{FM}=200\text{ mA}$
- Power Dissipation of 200mW

## Package Marking and Ordering Information

| Product ID | Pack   | Marking | Qty(PCS) |
|------------|--------|---------|----------|
| BAR43CFILM | SOT-23 | KL3     | 3000     |



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

| Parameter                                                                        | Symbol                          | Value           | Unit                 |
|----------------------------------------------------------------------------------|---------------------------------|-----------------|----------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 30              | V                    |
| Forward Continuous Current                                                       | $I_{FM}$                        | 200             | mA                   |
| Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$                     | $I_{FSM}$                       | 600             | mA                   |
| Repetitive Peak Forward Current @ $t\leq 1\text{s}, \delta\leq 0.5$              | $I_{FRM}$                       | 300             | mA                   |
| Power Dissipation                                                                | $P_D$                           | 200             | mW                   |
| Thermal Resistance from Junction to Ambient                                      | $R_{\theta JA}$                 | 500             | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range                                             | $T_j$                           | $-40 \sim +125$ | $^{\circ}\text{C}$   |
| Storage Temperature Range                                                        | $T_{stg}$                       | $-55 \sim +150$ | $^{\circ}\text{C}$   |

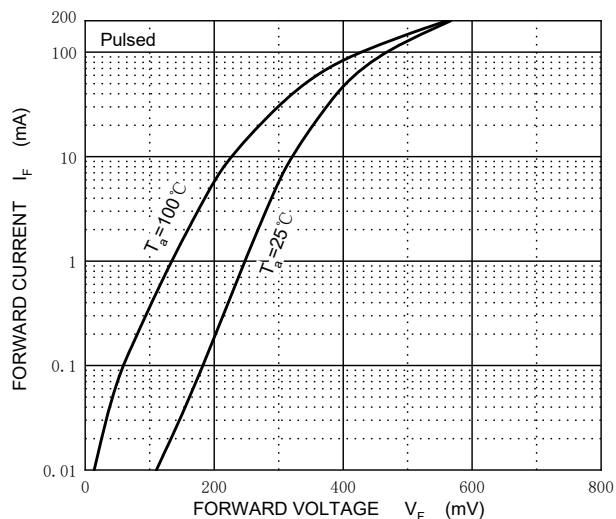
## Electrical Characteristics ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter             | Symbol     | Min | Typ | Max  | Unit          | Test conditions                                                |
|-----------------------|------------|-----|-----|------|---------------|----------------------------------------------------------------|
| Reverse voltage       | $V_{(BR)}$ | 30  |     |      | V             | $I_R=100\mu\text{A}$                                           |
| Forward voltage       | $V_F$      |     |     | 0.24 | V             | $I_{F1}=0.1\text{mA}$                                          |
|                       |            |     |     | 0.32 | V             | $I_{F2}=1\text{mA}$                                            |
|                       |            |     |     | 0.40 | V             | $I_{F3}=10\text{mA}$                                           |
|                       |            |     |     | 0.50 | V             | $I_{F4}=30\text{mA}$                                           |
|                       |            |     |     | 1    | V             | $I_{F5}=100\text{mA}$                                          |
| Reverse current       | $I_R$      |     |     | 2    | $\mu\text{A}$ | $V_R=25\text{V}$                                               |
| Diode capacitance     | $C_D$      |     |     | 10   | pF            | $V_R=1\text{V}, f=1\text{MHz}$                                 |
| Reverse recovery time | $t_{rr}$   |     |     | 5    | ns            | $I_F=I_R=10\text{mA}$<br>$I_{rr}=0.1\times I_R, R_L=100\Omega$ |

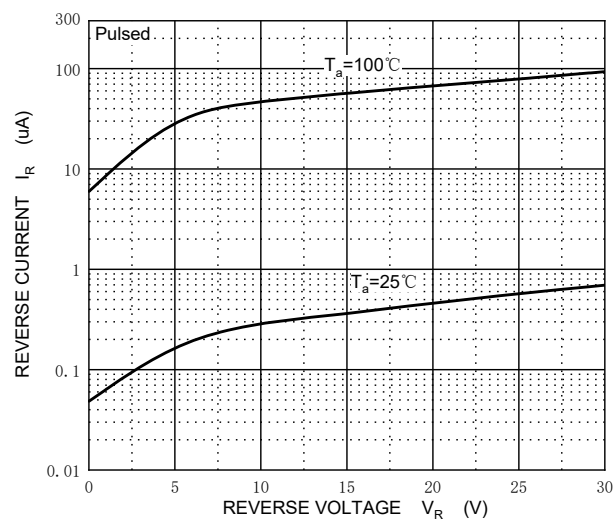


## Typical Characteristics

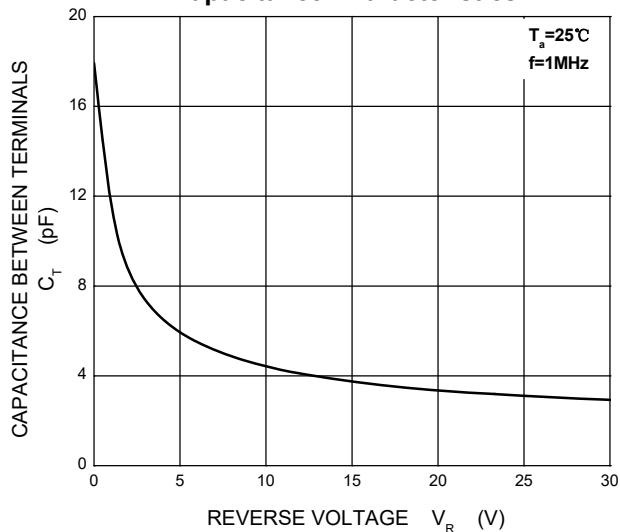
Forward Characteristics



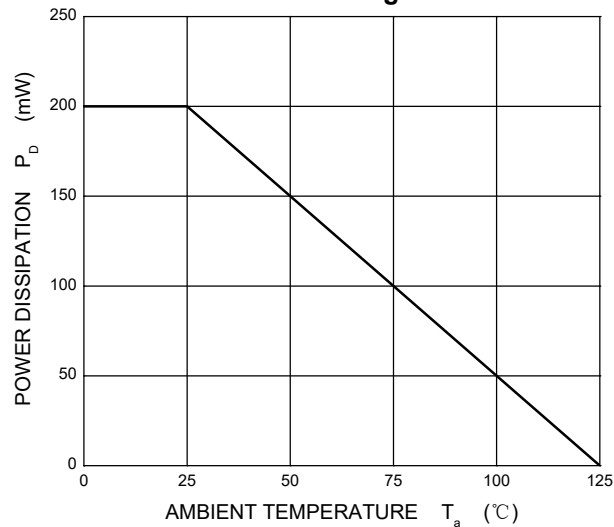
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve





## SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-23 Suggested Pad Layout



Note:  
1. Controlling dimension: in millimeters.  
2. General tolerance:  $\pm 0.05\text{mm}$ .  
3. The pad layout is for reference purposes only.



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