

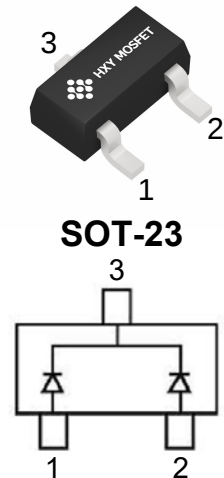


## Features

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

## Package Marking and Ordering Information

| Product ID     | Pack   | Marking | Qty(PCS) |
|----------------|--------|---------|----------|
| BAS40-05-E3-08 | SOT-23 | 45      | 3000     |



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

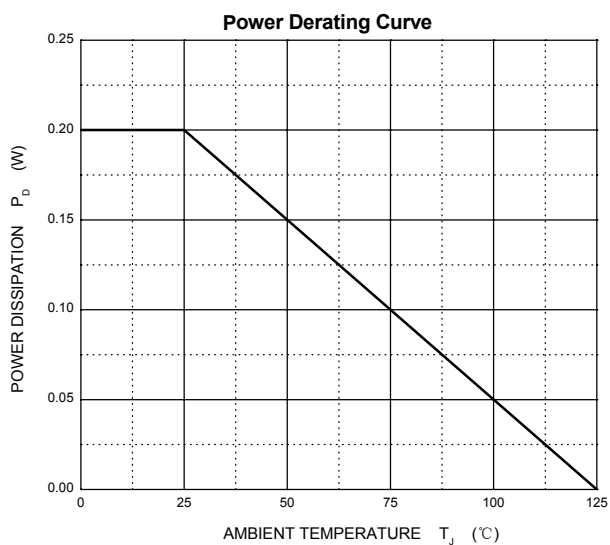
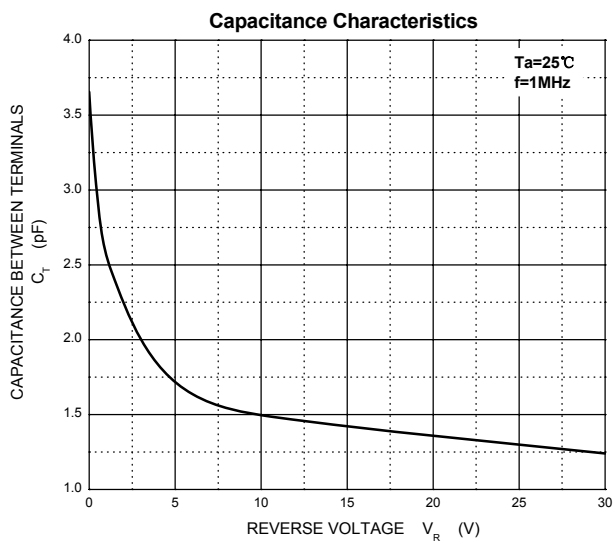
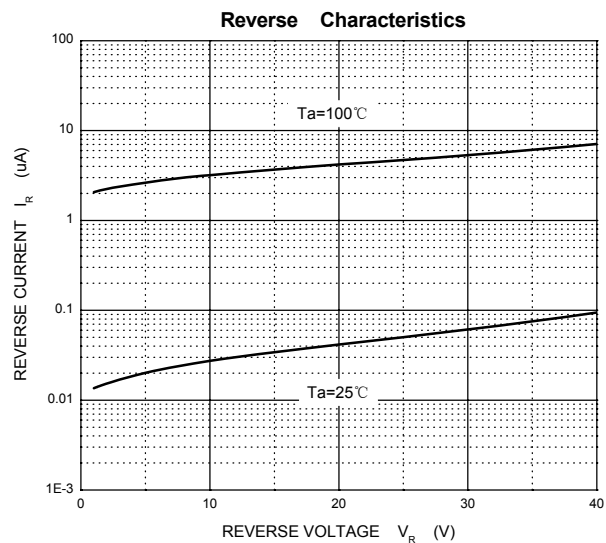
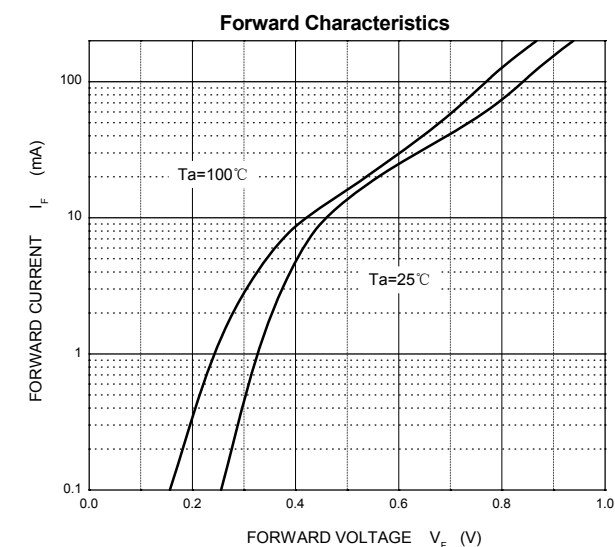
| Parameter                                                                                | Symbol                          | Limit    | Unit               |
|------------------------------------------------------------------------------------------|---------------------------------|----------|--------------------|
| Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 40       | V                  |
| Forward Continuous Current                                                               | $I_{FM}$                        | 200      | mA                 |
| Average Rectified Output Current                                                         | $I_O$                           | 200      | mA                 |
| Non-Repetitive Peak Forward Surge Current @ $t = 8.3\text{ms}$                           | $I_{FSM}$                       | 0.6      | A                  |
| Power Dissipation                                                                        | $P_D$                           | 200      | mW                 |
| Thermal Resistance Junction to Ambient                                                   | $R_{\theta JA}$                 | 500      | $^\circ\text{C/W}$ |
| Operating Junction Temperature                                                           | $T_J$                           | 125      | $^\circ\text{C}$   |
| Storage Temperature                                                                      | $T_{STG}$                       | -55~+150 | $^\circ\text{C}$   |

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

| Parameter                       | Symbol     | Test conditions                                                     | Min | Max         | Unit |
|---------------------------------|------------|---------------------------------------------------------------------|-----|-------------|------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R = 10\mu\text{A}$                                               | 40  |             | V    |
| Reverse voltage leakage current | $I_R$      | $V_R = 30\text{V}$                                                  |     | 200         | nA   |
| Forward voltage                 | $V_F$      | $I_F = 1\text{mA}$<br>$I_F = 40\text{mA}$                           |     | 380<br>1000 | mV   |
| Diode capacitance               | $C_D$      | $V_R = 0, f = 1\text{MHz}$                                          |     | 5           | pF   |
| Reverse recovery time           | $t_{rr}$   | $I_{rr} = 1\text{mA}, I_R = I_F = 10\text{mA}$<br>$R_L = 100\Omega$ |     | 5           | ns   |

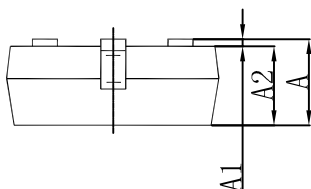
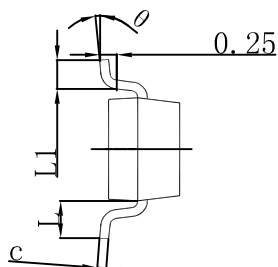
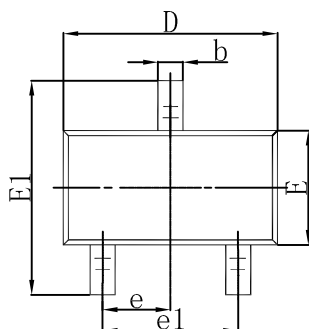


## Typical Characteristics





## 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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